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THE Journal OF THE Kansas Medical Society

SEPTEMBER
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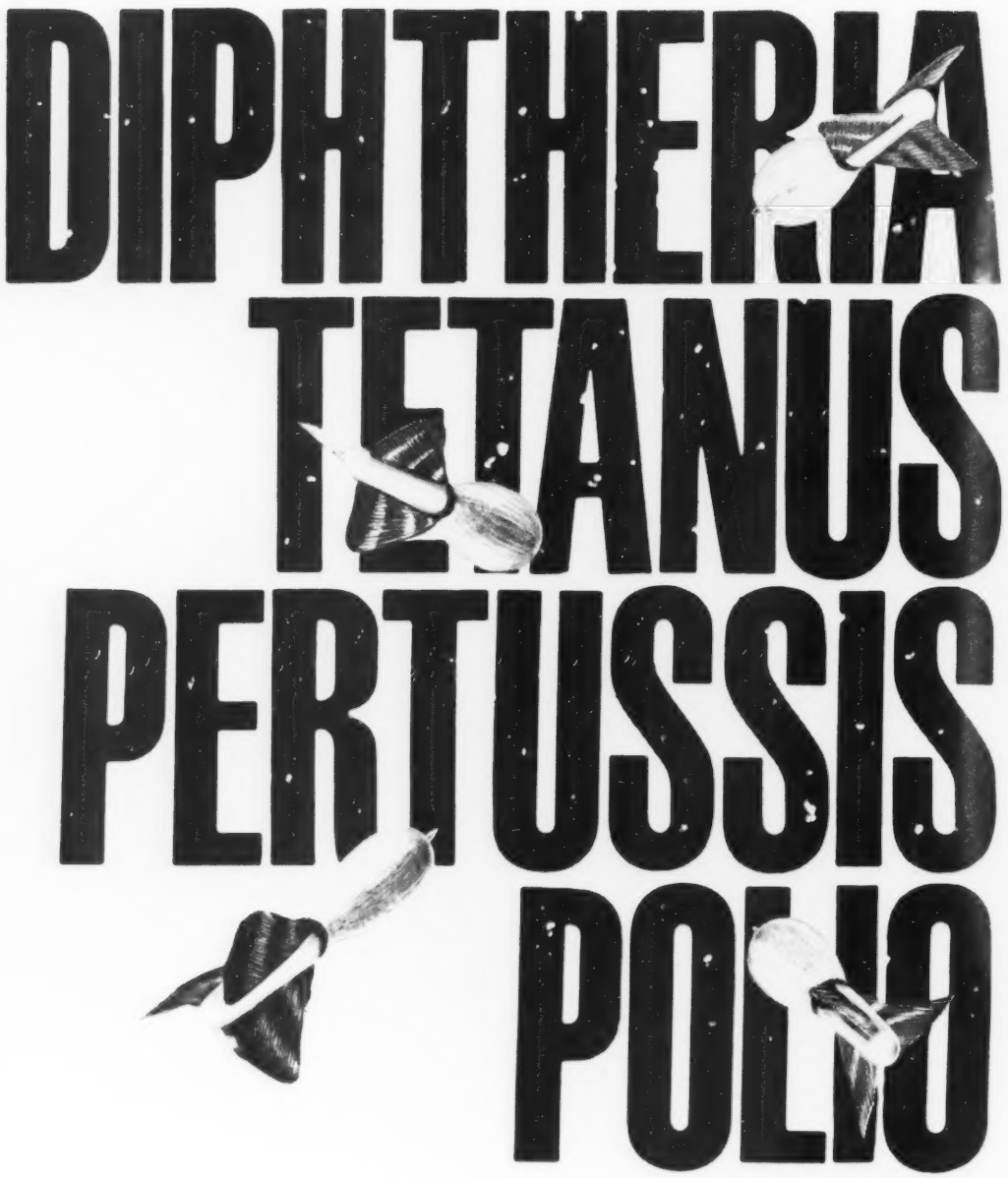
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*Barrett, C. D., Jr., *et al.: J.A.M.A.* 167:1103, 1958; *Ibid.:* Am. J. Pub. Health 49:644, 1959.

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THE JOURNAL
of the
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Volume LX SEPTEMBER, 1959 Number 10

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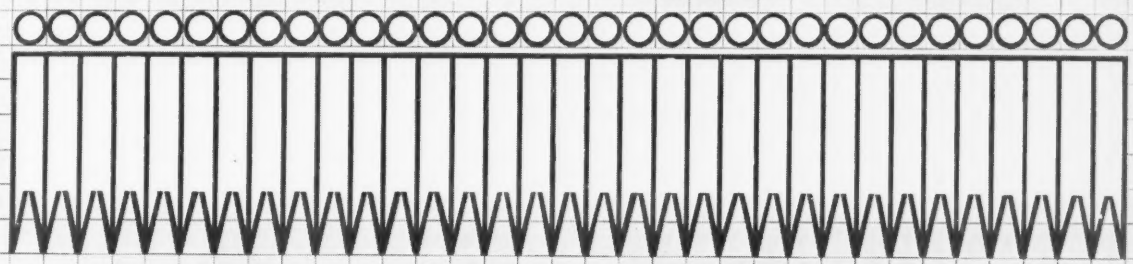

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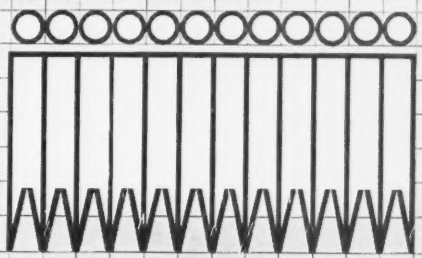

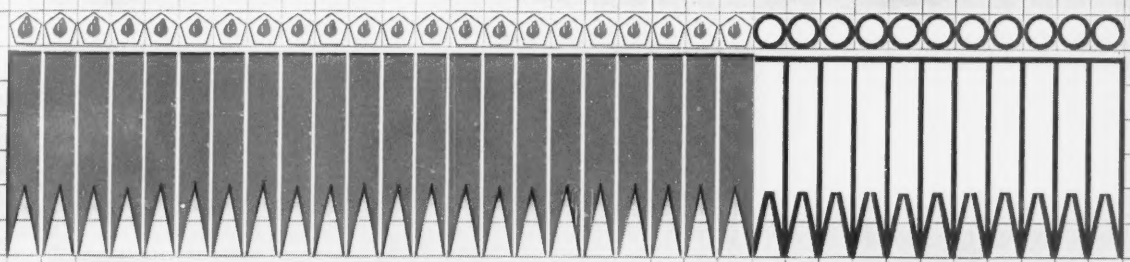

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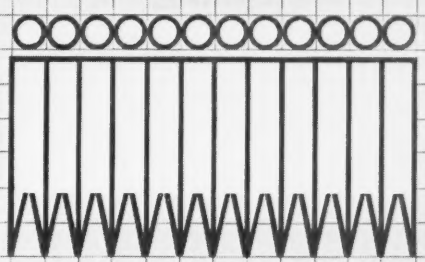

1. Boland, E. W., and Headley, N. E.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.
2. Bunim, J. J., et al.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.

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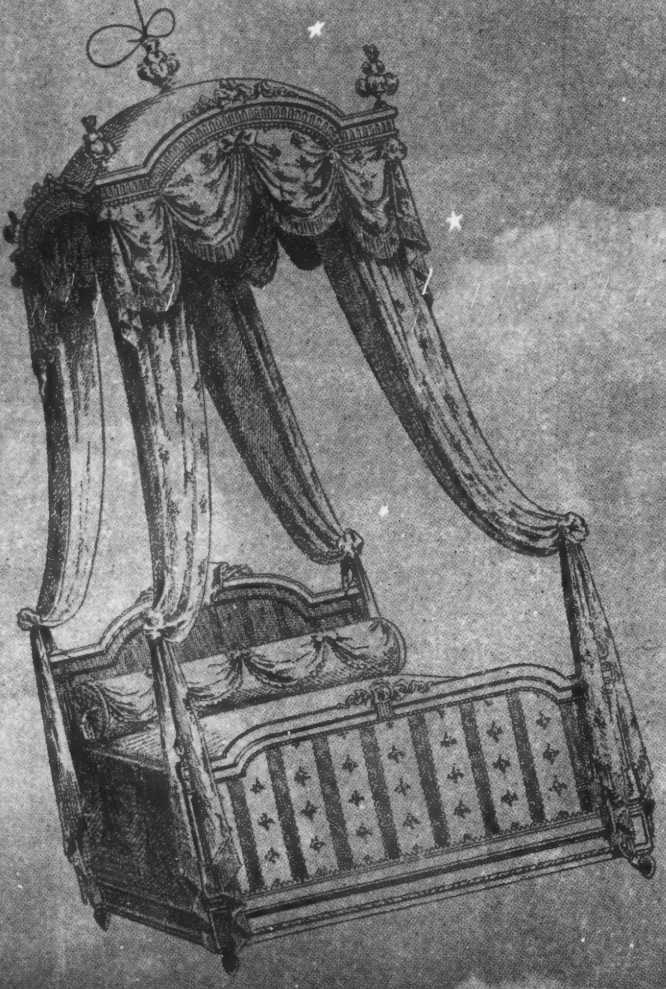

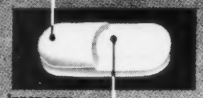
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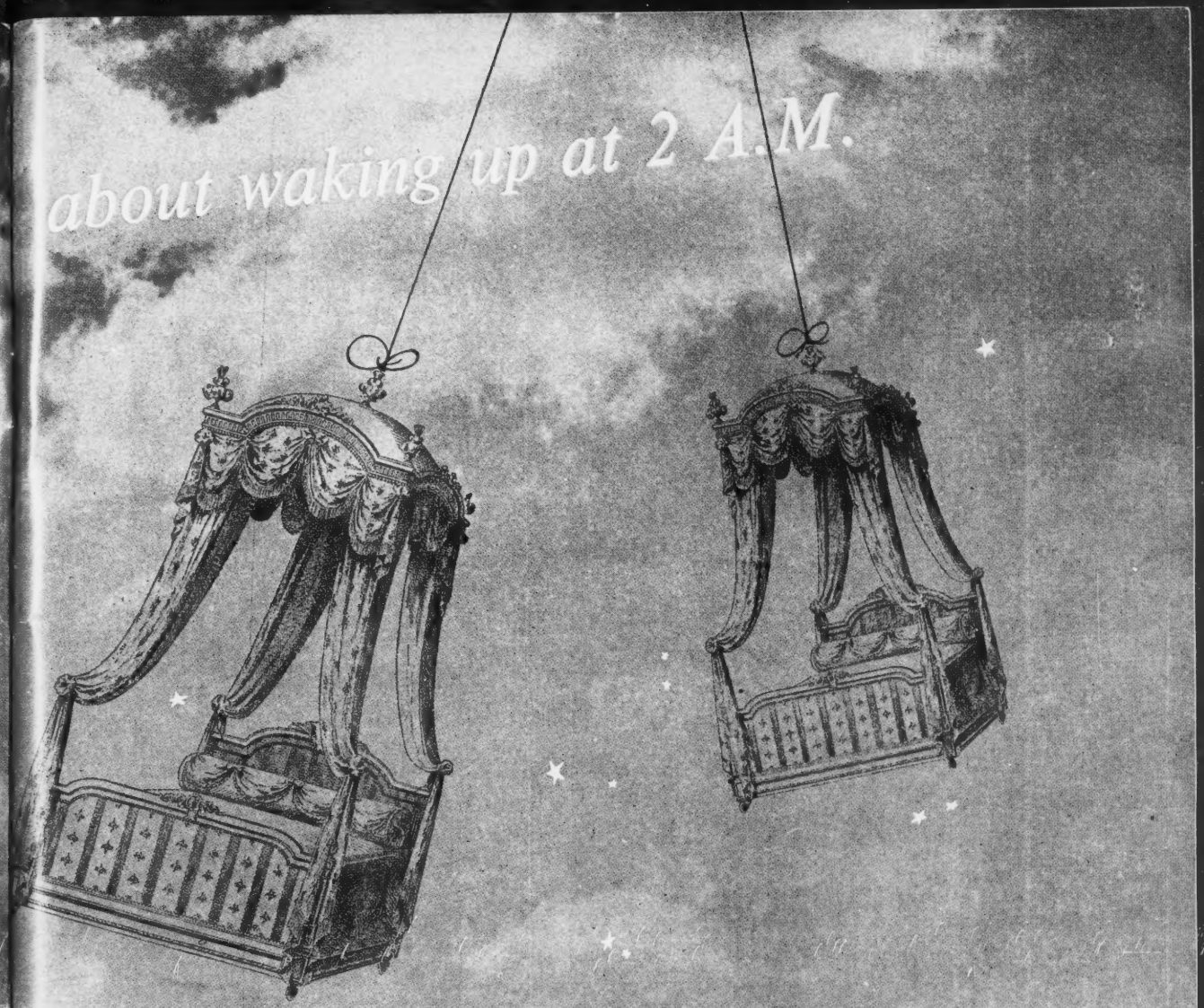

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1 Schlesinger, E. B.: Tr. New York Acad. Sc. 2:6, (Nov.) 1948.
2 Richards, R. K., and Taylor, J. O.: Anesthesiology 17:414, 1956.
3 Shideman, F. E.: Postgrad. Med. 24:207, 1958.
4 Berger, F.: Pharmacol. Rev. 1:243, 1949.

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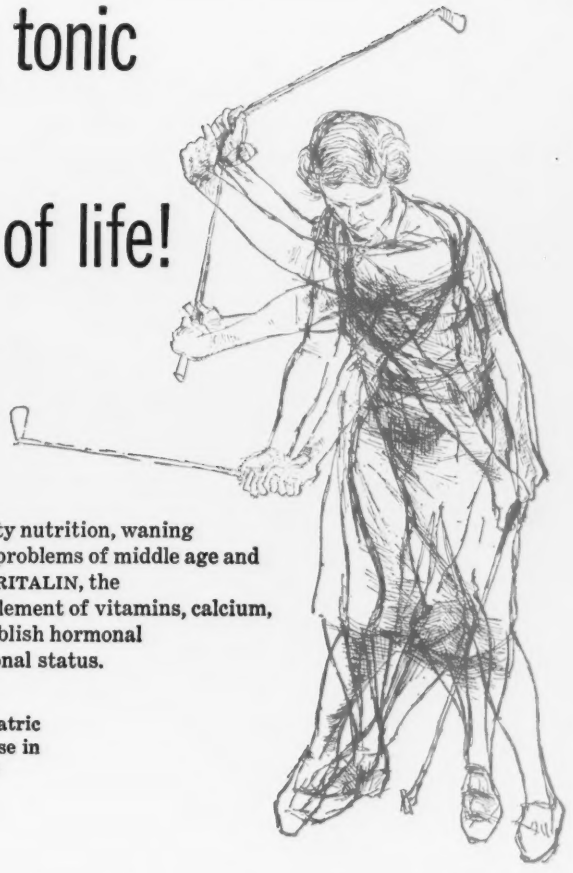

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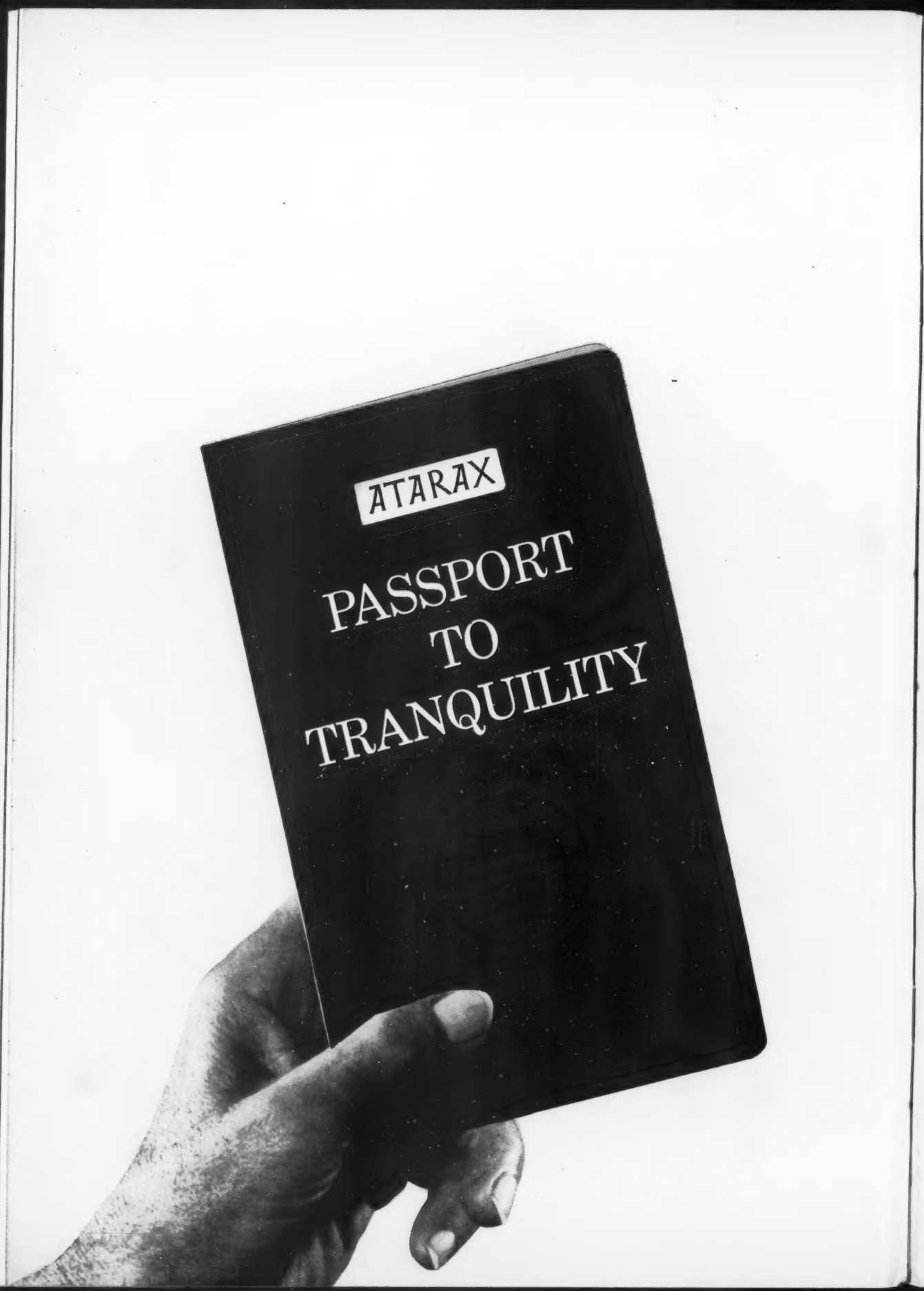
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References: 1. Farah, L.: Internat. Rec. Med. 169:379 (June) 1956. 2. Smigel, J. O., et al.: J. Am. Geriatrics Soc. 7:61 (Jan.) 1959. 3. Feinberg, A. R., et al.: J. Allergy 29:358 (July) 1958. 4. Eisenberg, B. C.: J.A.M.A. 169:14 (Jan. 3) 1959. 5. Maryssael, L.: Bruxelles-méd. 38:141 (Jan. 26) 1958. 6. Pfleger, R.: Med. Klin. 53:1030 (June 5) 1958. 7. Over 200 laboratory and clinical papers from 14 countries.

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1. Kuzell, W. C., and others.: Arch. Int. Med. 92:646, 1953. 2. Wolfson, W. Q.: J. Michigan M. Soc. 54:323, 1955. 3. Strandberg, B.: Brit. J. Phys. Med. 19:9, 1956. 4. Platt, W. D., Jr., and Steinberg, I. H.: New England J. Med. 256:823 (May 2) 1957.

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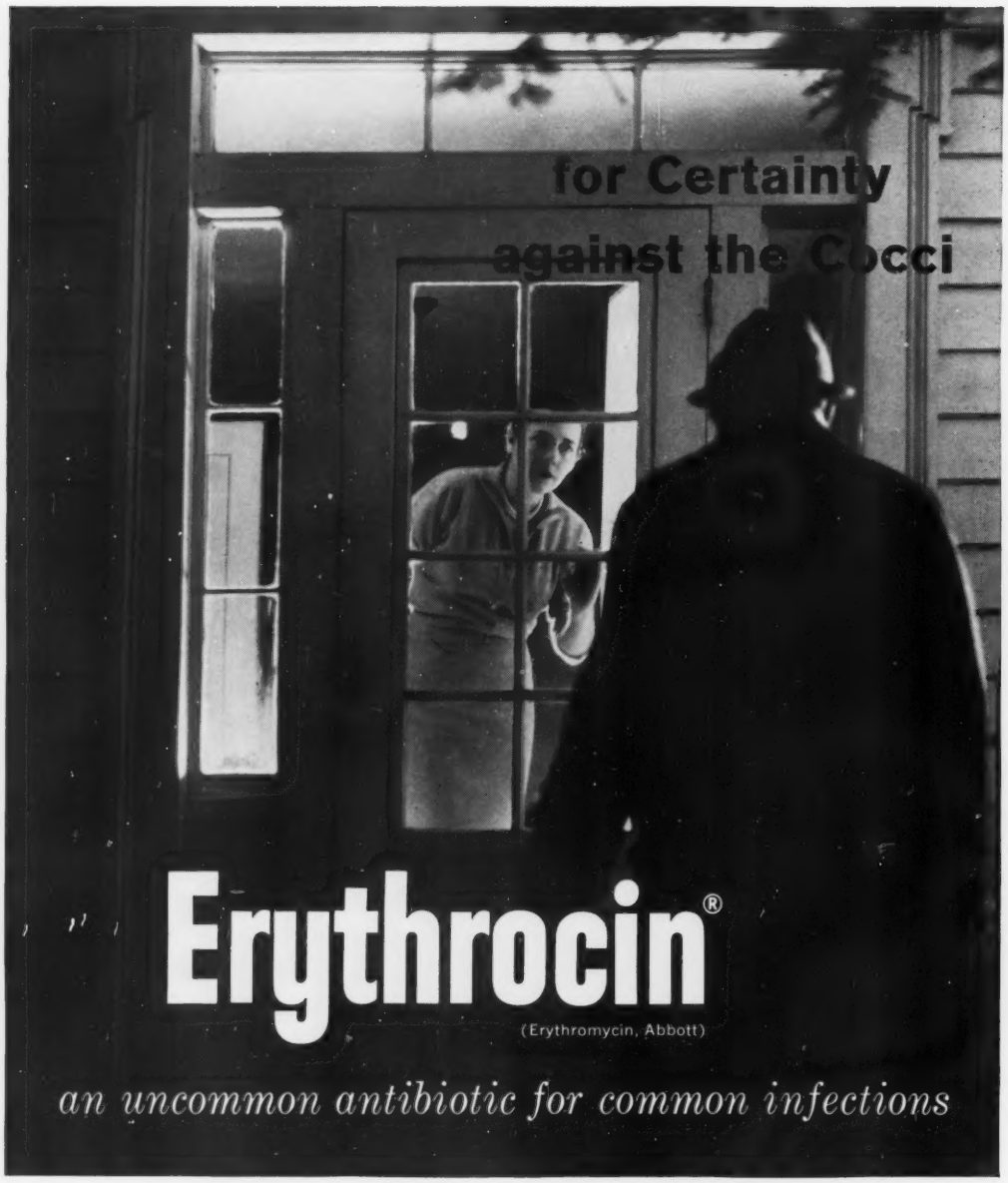

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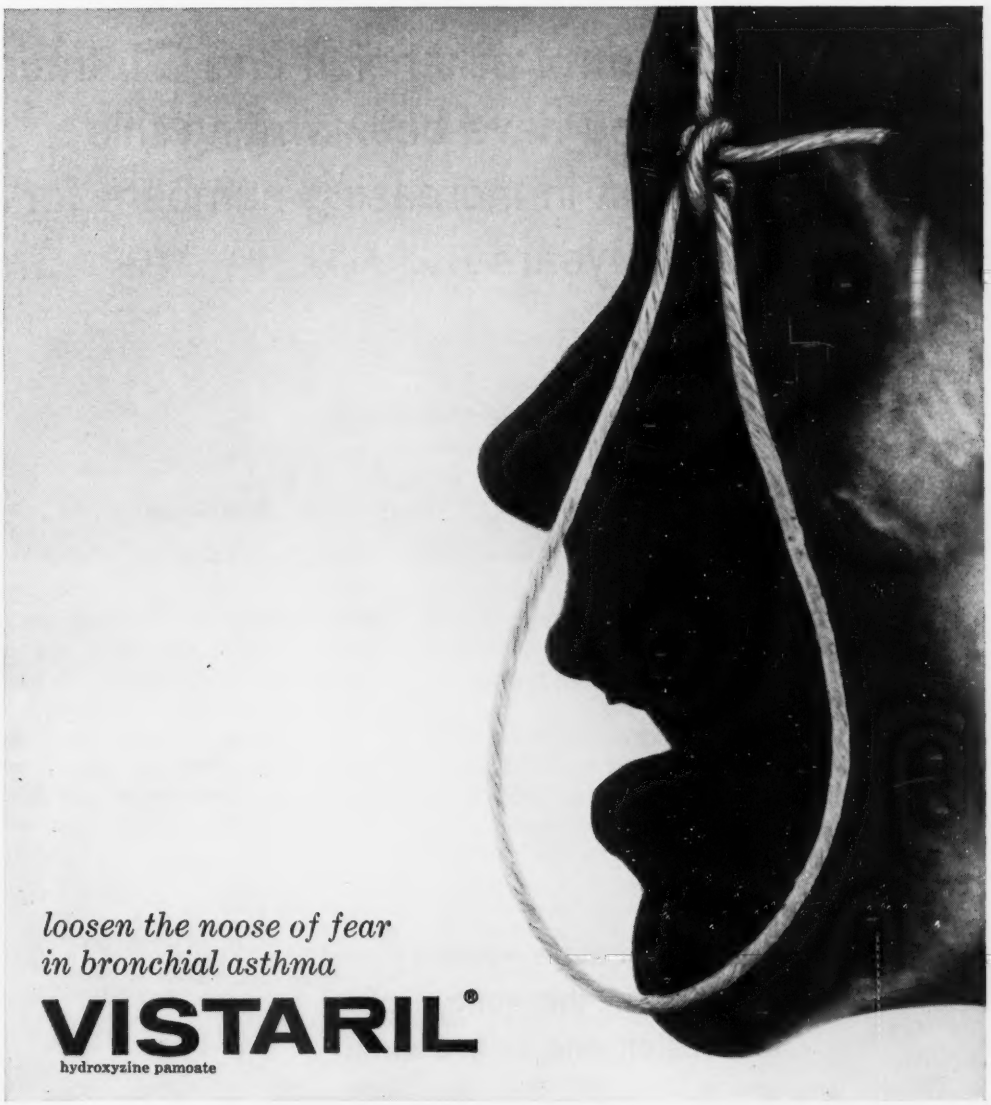

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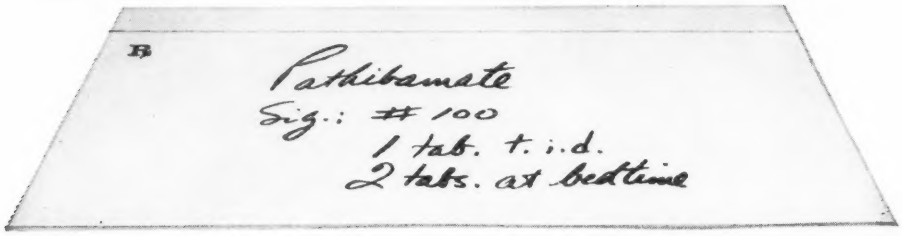

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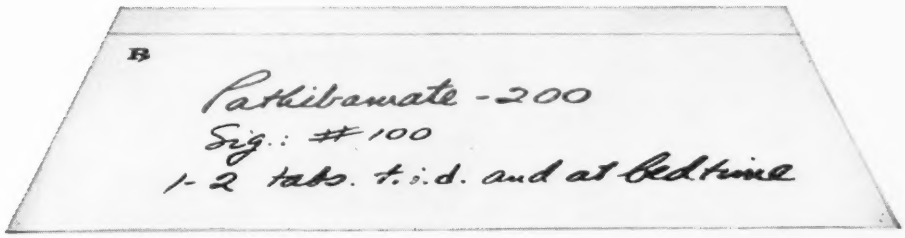

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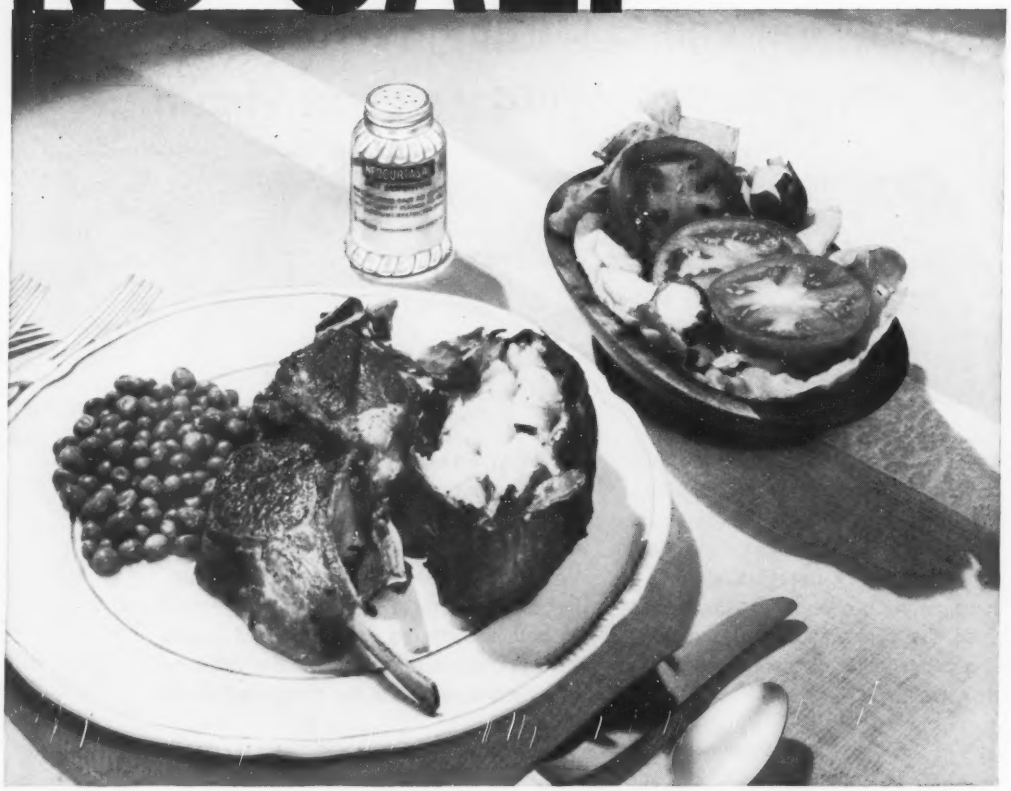

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1. Pennington, V. M.: Meprobamate (Miltown) in premenstrual tension. J.A.M.A. **164**:638, June 8, 1957.

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64% of 42 pregnancies were salvaged by progesterone

83% of 73 pregnancies were salvaged by Delalutin

Eichner,[3] found that in Delalutin-treated women, fetal salvage of infants below term weight (1000 to 2000 gm.) was significantly improved. 108 (76%) of 142 babies of this birth weight survived without mothers receiving progestational therapy, while 16 (100%) of 16 babies of this birth weight survived with mothers receiving Delalutin therapy. A comparison study was made of a group of repeated aborters treated with Delalutin, and a group with a similar history treated with bed rest and sedation.[4] Pregnancy salvage with Delalutin was twice that of the control group. Delalutin was found to be "highly active", well-tolerated and long-acting.

According to Tyler and Olson,[5] "These qualities of prolonged action and relative freedom from local reactions make [Delalutin] a generally more desirable therapeutic agent for intramuscular use than progesterone . . . ."

DELALUTIN BABIES WHOSE MOTHERS WERE HABITUAL ABORTERS

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Amy Sue Greenman
Lincolnwood, Ill.

William Peller
Skokie, Ill.

Randy Sinis
Denver, Colo.

Richard Miller
Denver, Colo.

Scott Knudsen
Norwich, Vt.

References: 1. Reifenstein, E. C. Jr.: *Annals N. Y. Acad. Sc.* 71:762 (July 30) 1958. 2. Boschann, H-W.: *ibid.*, p. 727. 3. Eichner, E.: *ibid.*, p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: *Am. J. Obst. & Gynec.* 76:279, 1958. 5. Tyler, E. T., and Olson, H. J.: *J.A.M.A.* 169:1843, 1959.

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DELALUTIN offers these advantages over other progestational agents:

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DELALUTIN is also potent and safe therapy for: threatened abortion; postpartum afterpains; amenorrhea, primary and secondary; dysfunctional uterine bleeding not associated with genital malignancy; infertility with inadequate corpus luteum function; production of secretory endometrium and desquamation during estrogen therapy; premenstrual tension; dysmenorrhea; cyclomastopathy, mastodynia, adenosis and chronic cystic mastitis.

Administration and dosage:

Because of its low viscosity, Delalutin may be administered with a small gauge needle (deep intragluteal injection). Complete information on administration and dosage is supplied in the package insert.

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Each of these healthy, normal babies was born by a mother with a documented previous history of true habitual abortion, who was treated during her most recent pregnancy with DELALUTIN.

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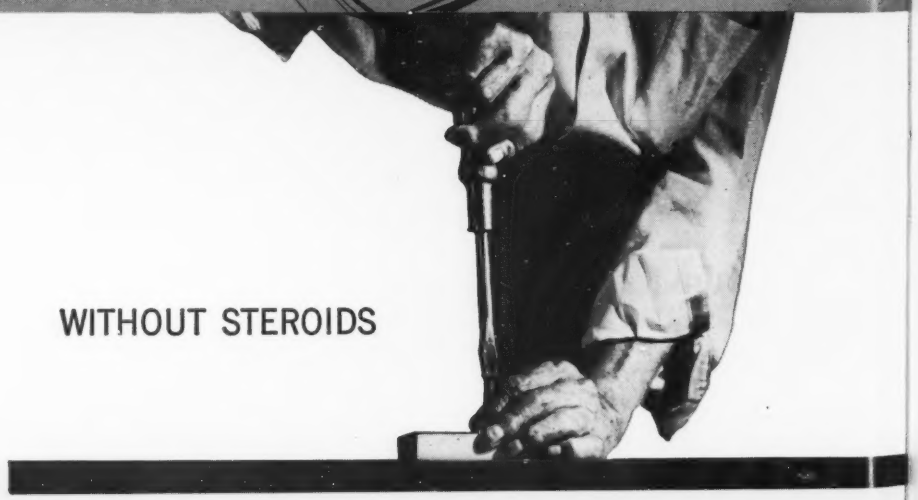

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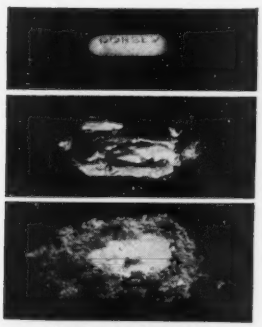

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All Buffered Pabirin is sodium- and potassium-free.

Dosage: Two or three tablets 3 or 4 times daily.

References: 1. Hart, D.; Bagnall, A. W.; Bunim, J. J., and Polley, F. H.: Ninth International Congress on Rheumatic Diseases, Toronto, Ont. (June 25) 1957. 2. Report of Joint Committee, Medical Research Council & Nuffield Foundation, Treatment of Rheumatoid Arthritis, British Medical Journal (April 13) 1957. 3. Friend, D. G.: New England J. Med. 257:278 (Aug.) 1957.

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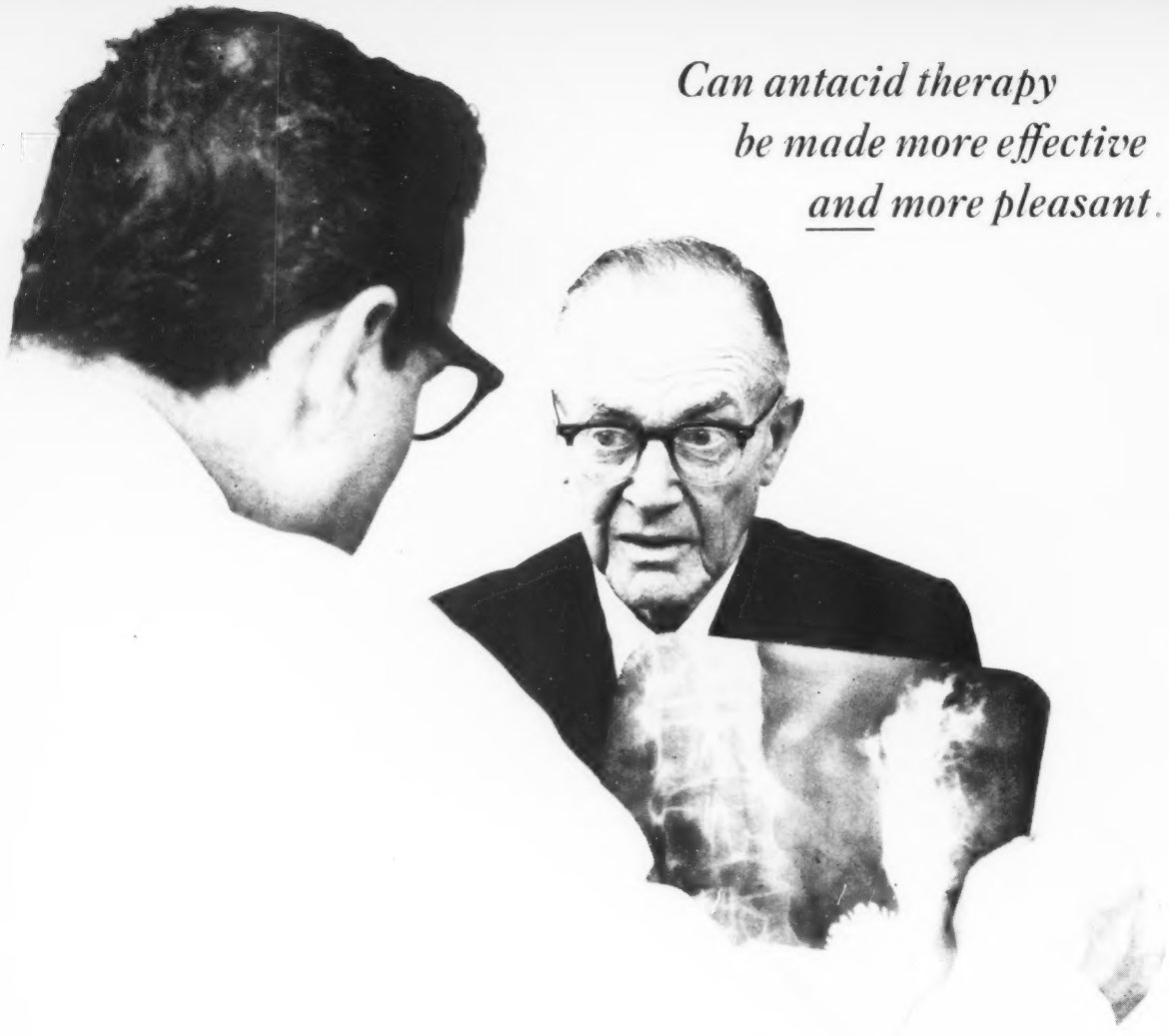

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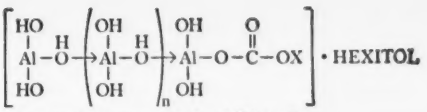

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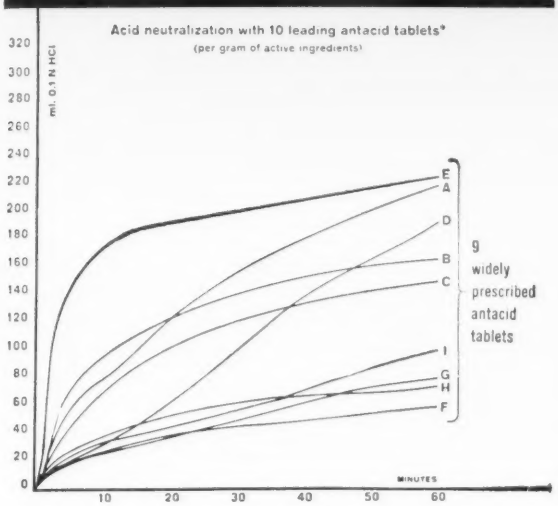

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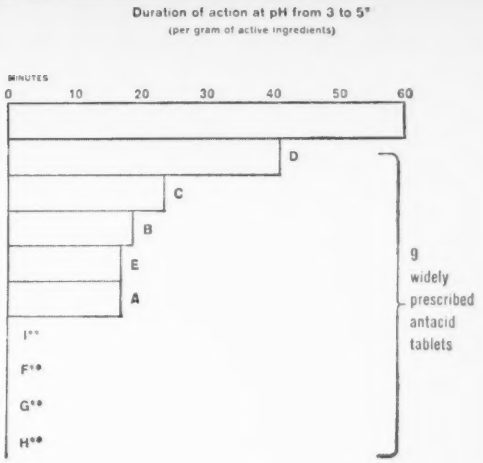

*Hinkel, E. T., Jr., Fisher, and Talnter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.

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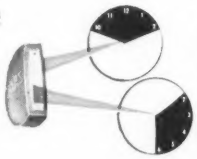
Relief with Triaminic is prompt and prolonged because of this special timed-release action . . . beneficial effect starts in minutes, lasts for hours



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Dosage: One tablet in the morning, mid-afternoon and at bedtime.

References: 1. Lhotka, F. M.: Illinois M. J. 112: 259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

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the complaint: "nervous indigestion"

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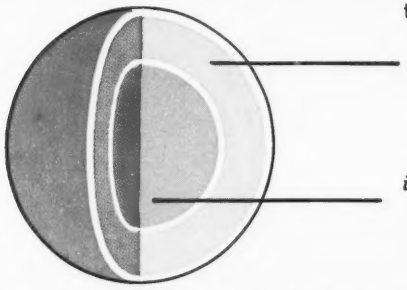

the formula: *in the gastric-soluble outer layer:*

Hyoscyamine sulfate	0.0518 mg.
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Phenobarbital (⅛ gr.)	8.1 mg.
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Packaging: FULVICIN is supplied as 250 mg. scored tablets, bottles of 30.

Bibliography: (1) Riehl, G.: Griseofulvin: An Orally Active Antibiotic, presented at Austrian Dermat. Soc. Meet., Vienna, Nov. 27, 1958. (2) Williams, D. I.; Marten, R. H., and Sarkany, I.: Lancet *2*:1212, 1958. (3) Blank, H., and Roth, F. J., Jr.: A.M.A. Arch. Dermat. *79*:259, 1959. (4) Goldfarb, N., and Rosenthal, S. A.: Current M. Digest *26*:67, 1959. (5) Reiss, F.: Medical Circle Bulletin *6*:9, 1959. (6) Robinson, H. M., Jr.; Robinson, R. C. V.; Bereston, E. S.; Manchey, L. L., and Bell, F. K.: Griseofulvin, Clinical and Experimental Studies, presented at Am. Dermat. Assoc. Meet., Atlantic City, N. J., June 3, 1959.

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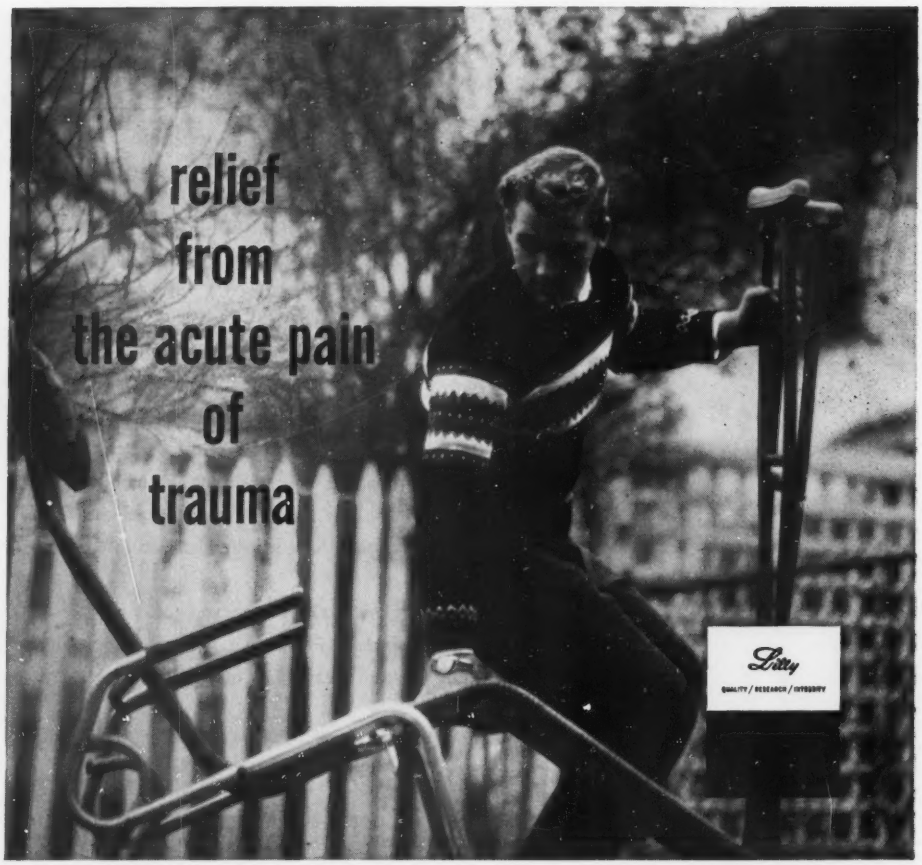

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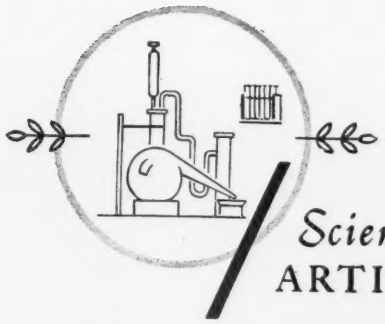

Scientific
ARTICLES

Kaposi's Disease

An Interesting If Not Well Understood Variety of Sarcoma

J. W. WELCH, M.D.; V. E. CHESKY, M.D., *and*
C. A. HELLWIG, M.D., *Halstead*

Kaposi[8a] in 1872 first described a disease now generally known as Kaposi's sarcoma which he named "idiopathic multiple pigmented sarcoma." In 1894 Kaposi[8b] altered the name of the disease to "idiopathic multiple hemorrhagic sarcoma." Since that time many investigators have assayed to change the name to correspond to their views as to the origin of the disease process. As a consequence many names are extant in the medical literature, but the eponym has persisted and the disease is most commonly known as "Kaposi's sarcoma" or "Kaposi's disease."

Incidence

The medical literature contains over 700 reported cases, many of them isolated case reports. The justification for adding yet another case report to the existing literature is primarily because the case to be presented is an interesting one, and secondarily, to call attention to the fact that the lesion, while not uncommon, may be easily overlooked or misdiagnosed and overtreated or undertreated at various stages of its progress, with painful results. Case reports appearing in the literature at intervals of two to three years should serve to keep physicians aware of the disease, thereby facilitating early accurate diagnosis.

Kaposi's sarcoma is probably more common than the statistics indicate since, in all likelihood, many cases go unreported and unrecognized. The disease has a predilection as to sex, nationality and geographical habitat, age, and site of origin. The peak of frequency of the disease is in the fifth, sixth, and seventh decades of life and the male is more often afflicted than the female by a ratio of 20 to one. Although no part of the world's population is unaffected by Kaposi's sarcoma, it is more prevalent in peoples of Eastern Europe and Northern Italy. The bulk of the statistics indicate that it affects Northern Italians most frequently, followed by Jews, Russians, and Poles; Negroes and Orientals are not immune, but cases are infrequently reported in these races.

A single case report of an interesting case of Kaposi's disease. The disease is reviewed briefly from the standpoint of history, incidence, etiology, diagnostic features, pathology, treatment problems and prognosis. Photomicrographs accompany the pathologic description. The reader is admonished that any measure for control of the disease is dependent upon early accurate diagnosis and correct initial therapy.

Definition

Kaposi's sarcoma is a true but atypical sarcoma of

From the Hertzler Research Foundation, and the Hertzler Clinic, Halstead, Kansas.

Figure 1. Kaposi's disease. Sagittal section of large ulcer of heel.

blood vessel origin characterized by a cutaneous tumor which usually appears first on the distal portion of an extremity as a bluish-red macule which progressively forms other macules which slowly multiply and coalesce to form nodules and plaques. The lesion tends to be unilateral at the onset, later becoming bilateral and progressing to involve the trunk and finally, in about 10 per cent of cases, the viscera and mucous membranes. There are numerous case reports in which the secondary manifestations, such as lymphadenopathy, symmetrical swelling of the extremities and visceral involvement, appear first, to be followed in most cases by the cutaneous manifestations. Alteration in the hemogram is not marked or constant. The most commonly reported changes have been secondary anemia and monocytosis and, less frequently, eosinophilia and lymphocytosis. Flarer has reported the presence of an increased number of abnormal mononucleated cells in Kaposi's disease as well as in mycosis fungoides. Others have reported Kaposi's sarcoma in association with mycosis fungoides[9, 10] and with other malignant lymphomas such as Hodgkin's disease[7, 17] lymphosarcoma,[3] and lymphatic leukemia.[15, 22]

Case History

In September, 1958, a seventy-six-year-old, white female was referred to the Hertzler Clinic with "a sore" on the plantar surface of the right heel present for nine months, two masses present in the right groin for six weeks, and swelling of the right leg for two to three months. The patient was first seen by her local doctor 33 months prior to her admission to the Hertzler Clinic, with a small reddish-blue nodule on the plantar surface of the right heel. The lesion was excised at this time and a diagnosis of angioendothelioma made.

Two months later the patient was seen by a dermatologist and radiologist who diagnosed "a reticuloendothelioma, or an angioendothelioma, or possibly Kaposi's disease" and treated the lesion with 1600 r units, well windowed, at one sitting.

Several months later the patient consulted another group of physicians who did not arrive at any definite diagnosis but informed the patient of normal physical findings and advised her that she had been adequately treated.

The patient remained reasonably well, with a residual sensitive area at the treated site which remained

pigmented, until December, 1957, two years after onset. The involved area of the heel then ulcerated and she was again treated, this time with 2600 r x-rays and 9600 milligram hours of radium followed by 2500 r in five doses to a 2 cm. circle at 200 KV h.v.l, 1 mm. Cu at 50 cm. distance with a Thoreus A filter.

The ulcerated area did not heal and she was placed on additional treatment until August, 1958, with penicillin, streptomycin, and Parenzyme®. From August, 1958, until she was referred to the Hertzler Clinic on September 11, 1958, she was treated with Furacin® ointment locally and chloramphenicol systemically with no improvement.

Physical Examination

The patient's temperature, pulse, and respiration were normal and she seemed in apparent good health for her age (seventy-six). The only positive physical findings were: minor cervical adenopathy, mild benign hypertension of 180/80, a matted adenopathy in the right groin measuring approximately 5 x 3 cm., a large deep sloughing ulcer measuring 2.5 x 2.5 cm., with a grayish floor covered by inflammatory exudate on the plantar surface of the right heel, and 2-plus pitting edema of the right leg and ankle.

Laboratory Procedures

Most of the laboratory findings were within the limits of normal as follows: hemoglobin 81 per cent or 12.5 gm., wbc. 6,850 with a normal differential with 3 eosinophiles; blood urea nitrogen 8.7; urinalysis normal; total protein 5.4, albumin 3.15, globulin 2.25 mgm./100 cc.; Kline negative, blood sugar 91. Bacteriologic examination of the ulcer: coagulase positive, staphylococcus aureus and B. proteus sensitive to chloramphenicol and albapenicillin. Heel x-ray: normal bony structure. X-ray of chest normal.

On September 30 an excision biopsy of the lesion in the right groin was performed under local anesthesia. The pathology report read: Metastasis of anaplastic tumor (sarcoma) in lymph node (Fig. 3). It was then decided to amputate the right leg between the upper and middle third of the tibia in order to rid the patient of an extremely painful ulcer that was apparently recalcitrant to proven methods of therapy. Amputation was advised and accepted by the patient. Accordingly on October 7, 1958, the right leg was amputated at the junction of the upper and middle third of the tibia. At the same time the right inguinal area was re-entered and cleaned of all tumor masses that could be found, in an effort to establish free lymph channels. The postoperative course was smooth and the stump healed by primary union.

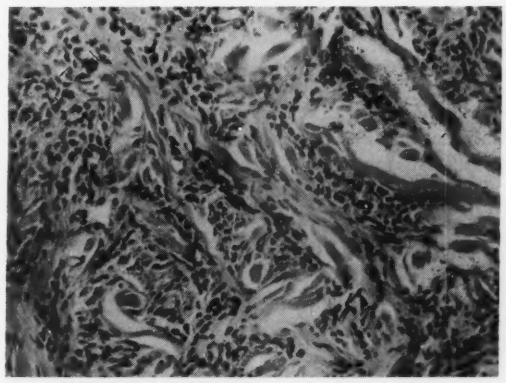

Figure 2. Kaposi's disease. Primary tumor.

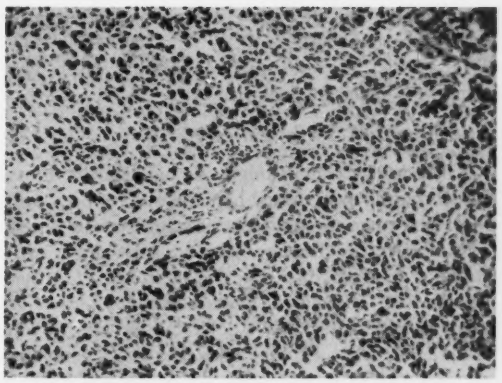

Figure 3. Kaposi's disease. Inguinal metastasis.

Pathologic Report

The gross specimen consisted of the right leg amputated in the middle of the tibia. The leg measured 24 cm. in length. On the plantar surface near the heel was a deep ulcer (Fig. 1) 2.5 cm. x 2.5 x 1 cm. in size, the base of which was grayish in color and covered with an inflammatory exudate. No tumor was palpable. The muscles, blood vessels, and nerves of the leg were dissected and manifested no pathologic changes. Sagittal sections through the ulcer showed a crater 2 cm. wide and 1.5 cm. in depth. The wall of the ulcer was hard and whitish in color, but no invasive growth was seen in the surrounding fat tissue or bone.

Microscopic Report

The ulcer bed was covered with a layer of inflammatory cells and necrotic material (Fig. 2). There was extensive necrosis of the subcutaneous tissue. In the deeper layers tumor growth was noted consisting of spindle cells which varied greatly in size and form, and some of which had unusually large dark-stained nuclei. Tumor cells lined some of the blood vessels, invaded the surrounding tissue in small nodes and in strands, and reached the deeper layers of the

subcutaneous tissues. Some infiltration with plasma cells was noted.

Diagnosis: Kaposi's sarcoma of the heel; deep ulcer with extensive necrosis.

Etiology and Pathogenesis

The etiology and pathogenesis of Kaposi's disease is still controversial. Many hypotheses have been proffered and none, as yet, have been universally accepted. Choisser and Ramsey have categorized the many etiologic theories into four main groups: (1) neoplasm, (2) infectious granuloma, (3) infectious granuloma with neoplastic potentialities, and (4) reticulo-endothelial hyperplasias. The most commonly accepted theory as to origin of the disease process is that it is primary or secondary to chronic hyperplastic inflammation. Recent investigation,[2, 21] however, lends some credence to the carcinogenic hypothesis, since it has been possible to induce similar angiosarcomatous lesions in experimental animals with injection of carcinogens such as azo dyes and hydrocarbons. The sex factor and the influence of sex hormones cannot be ignored since the sex incidence of the disease is so preponderantly male. Andervont's work in which he found a reduction of tumor induction after castration and testosterone pellet implantation, must be acknowledged. Hereditary vascular dysplasia must also be considered in view of the racial preponderance in Italians and Jews. The work of Greco and his group, who studied the disease in several members of the same family and came to the conclusion that the disease was of infective mycotic origin, must be recognized. Van Cleve and Hellwig also feel that there was an infective agent attacking the vascular and perivascular system with the lesions assuming neoplastic characteristics in predisposed subjects under certain conditions. Such are some of the theories as to etiology; it is not necessary to add: the etiology is unknown.

Diagnosis and Treatment

In a great many instances the first manifestation of Kaposi's disease is the pathognomonic bluish-red well-demarcated macule, easily diagnosed. If the cutaneous manifestation is either late or absent, the symmetrical elephantiasis of the extremities is fairly typical, especially in the presence of lymphadenopathy. A high index of suspicion is necessary if the disease is atypical, but the majority of cases are typical, and it is with these that we are largely concerned.

Treatment

The most effective therapy for Kaposi's sarcoma is irradiation, especially if the lesions are multiple or the disease diffuse. Most lesions, and particularly the early ones, will respond to low voltage unfiltered roentgen therapy at weekly intervals. When the deeper structures, such as bones, lymph nodes, and viscera become involved, higher voltage—200 to 240 k.v. with cross-fire technic—is indicated. If leg edema is present, x-ray therapy should be conservative, since indications of impaired blood supply are present. Overtreatment may result in a chronic painful ulcer and even necrosis, infection, and gangrene.

The role of surgery, electric desiccation, radium, and nitrogen mustard are not too well documented in the literature. McCarthy and Pack utilized practically all modalities of therapy in their series of cases, including excision with scalpel and cautery; radium pack; external and interstitial radon; contact x-rays and 100 kilovolt, 200 kilovolt, and 240 kilovolt x-ray with all gradation of factors. They felt that in an early case, wide surgical excision can yield gratifying results. They believe, however, that surgery is contraindicated if the tumors are extensive or multiple or if edema is coexistent.

The treatment then could reasonably be outlined as wide surgical excision in a single early lesion and conservative doses of x-ray if the sarcoma is extensive or if edema is present. Radium therapy has been disappointing and nitrogen mustard of no value at all.

Prognosis

Contrary to Kaposi's original belief that the disease was rapidly fatal, the clinical course as a rule is long, since the progress of the disease is slow and characterized by remissions and exacerbations. Life expectancy of patients after the original diagnosis has been established is estimated at between five and twenty-five years with the average in the neighborhood of ten years. Death commonly occurs from intercurrent disease since Kaposi's sarcoma has its peak of frequency in the fifth to seventh decades of life. Death from Kaposi's disease is often the result of hemorrhage or emaciation due to visceral involvement.

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References

1. Aegerter, E. E., and Peale, A. R.: Kaposi's sarcoma: A critical survey, Arch. Path. 34:413-422 (Aug.) 1942.

2. Andervont, H. B., and Dunn, T. B.: Effect of castration and sex hormones on induction of tumors in mice with o-amino-azotoluene, J. Nat. Cancer Jour. 7:455-461 (June) 1947.

3. Bluefarb, S. N., and Webster, J. R.: Kaposi's sarcoma associated with lymphosarcoma, Arch. Int. Med. 91:97-105 (Jan.) 1953.

4. Choisser, R. M., and Ramsey, E. M.: Angioreticuloendothelioma of the heart, Am. J. Path. 15:155-177, 1939; Etiology of Kaposi's disease, Southern M. J. 33:392-396, 1940.

5. Flarer, F. cited by Bertaccini, G.: Kaposi's cutaneous sarcoma; four new cases, Gior. ital. di dermat. e sif. 80:631-670 (Aug.) 1939.

6. Greco, N. V.: Kaposi's sarcoma due to Cryptococcus haematicon, Semana med.: 1433-1439; 1037-1038, May-June 1939.

7. Greenstein, R. H., and Conston, A. S.: Co-existent Hodgkin's disease and Kaposi's sarcoma: report of a case with unusual clinical features, Am. J. Med. Sc. 218:384-388 (Oct.) 1949.

8. Kaposi, M.: a) Idiopathisches multiples Pigmentsarcom der Haut, Arch. Derm. Syph., Berlin, 4:265-273, 1872. b) Pathologie und Therapie der Hautkrankheiten. Urban und Schwarzenberg, Berlin, 1899, ed. 5.

9. Lane, C. G., and Greenwood, A. M.: Lymphoblastoma (mycosis fungoides) and hemorrhagic sarcoma of Kaposi in the same person, Arch. Dermat. & Syph. 27:643-654 (Apr.) 1933.

10. Lapowski, P.: Idiopathic multiple pigment sarcoma (Kaposi's), Arch. Dermat. & Syph. 33:170 (Jan.) 1936.

11. McCarthy, W. D., and Pack, G. T.: Malignant blood vessel tumors: Report of 56 cases of angiosarcoma and Kaposi's sarcoma, Surg., Gynec. & Obst. 91:465-492 (Oct.) 1950.

12. Nesbitt, S., Mark, P. F., and Zimmerman. H. M.: Disseminated visceral idiopathic hemorrhagic sarcoma (Kaposi's disease); Report of case with necropsy findings, Ann. Int. Med. 22:601-655 (Apr.) 1945.

13. Ormsby and Montgomery, Diseases of the Skin, Phila., Lea & Febiger, ed. 8, 1955, pp. 910-915.

14. Ronchese, F., and Kern, A. B.: Kaposi's sarcoma (angioreticulomatosis), Postgrad. Med. 14:101-111 (Aug.) 1953.

15. Sachs, W., and Gray, M.: Kaposi's sarcoma and lymphatic leukemia: Report of a case with histologic evidence of two diseases in the same lesion, Arch. Dermat. & Syph. 51:325-329 (May) 1945.

16. Sherwin, B., and Gordimer, H.: Kaposi's sarcoma; case report with unique visceral manifestations, Ann. Surg. 135:118-123 (Jan.) 1952.

17. Talbott, J. H.: Clinical manifestations of Hodgkin's disease, New York State J. M. 47:1883-1888 (Sept. 1) 1947.

18. Tedeschi, C. G., Folson, H. F., and Carnicelli, T. J.: Visceral Kaposi's disease, Arch. Path. 43:335-357 (Apr.) 1947.

19. Van Cleve, J. V., and Hellwig, C. A.: Case of idiopathic hemorrhagic sarcoma (Kaposi's) with autopsy findings, Urol. & Cutan. Rev. 39:246-251 (Apr.) 1935.

20. Weller, G. L.: The clinical aspects of cardiac involvement (right auricular tumor) in idiopathic hemorrhagic sarcoma (Kaposi's disease), Ann. Int. Med. 14:314-322 (Aug.) 1940.

21. White, J., and Stewart, H. L.: Intestinal adenocarcinoma and intra-abdominal hemangio-endothelioma in mice ingesting methylcholanthrene, J. Nat. Cancer Inst. 3:331-347 (Dec.) 1942.

22. Wolf, I.: Discussion in Rosin, I.: Kaposi's sarcoma associated with lymphatic leukemia, Arch. Dermat. & Syph. 48:566 (Nov.) 1943.

'Beeps' From a Heartbeat

A medical instrument that is expected to reduce surgical risks by signaling physicians instantly when it becomes necessary to perform heart massage or other forms of resuscitation was demonstrated at Atlantic City in connection with the annual meeting of the American Medical Association. It's the "heart monitor," a device less than five inches long and weighing only six ounces. It emits "beeping" signals translating the electric-wave activity of a patient's heart.

Each human heartbeat produces one or more small electrical currents or impulses. Measurement of the amplified electrical impulses gives a quicker and more accurate indication of heart condition than can be obtained by monitoring only the sounds of heartbeat, blood pressure or pulse.

When this small self-contained instrument is strapped to a patient's arm and is turned on to transmit its signals, a surgeon listens for any interruptions or changes that may warn of a cardiac arrest or other heart disturbance. Operating-room personnel are thus all alerted instantly to a possible need for heart massage, injection of stimulants, administration of oxygen, electrical shock and other lifesaving measures.

The monitor utilizes a low-voltage, mercury-battery power supply and high-gain transistorized amplifier. It is usually strapped to a patient's left forearm, and an electrode, connected to the monitor by a small wire, is strapped to the patient's right forearm or other part of the body.

In cases where the unit cannot be attached to the patient's forearm (as in surgery on infants) two electrodes or needles can be used and the monitor can be placed elsewhere on the patient's body, or nearby in the room.

A single small switch operates the entire device, turning it on and off and operating the tuner. It is possible to tune in various electrical waves detected and recorded by electrocardiographs. Normally the unit is turned to the "R-wave" activity of the ventricle portion of the heart, the part that performs the blood-pumping function.

The heart monitor was developed by William F. Veling, a Detroit surgeon, and was demonstrated by the National Cylinder Gas Division of Chemetron Corp.

The device is simple to operate and does not require constant adjustment of the visual or manual attention of surgeons and other operating-room personnel. The audible signal can be replaced by a light or other signal for use in recovery rooms or wards, so as not to disturb other patients.

The Nation's Health

The Present and Future Role of the Federal Government

ELLIOT L. RICHARDSON, *Washington, D. C.*

Members and guests of the Kansas Medical Society, I deeply appreciate the honor of being invited to share with you in the celebration of your 100th anniversary. May your affairs prosper mightily in the centuries to come!

For me this is a uniquely pleasurable occasion. While I am a lawyer by profession, I feel more or less at home among doctors. My father, both grandfathers, and several uncles were doctors. Both my brothers are actively engaged in medical practice and research.

I am delighted, therefore, to have this chance to review certain aspects of the role of the Federal Government in the health of the Nation. I do this in the hope that you will find it helpful to hear the problems of medicine and its sister professions described from a point of vantage that may perhaps open new perspectives and permit an objectivity not always possible under the pressing urgencies of daily life and work.

With the exception of a flurry of health activities during and after World War I, the Federal Government played a limited role in family and community health until the thirties. During the First World War, for example, the Public Health Service was authorized to provide extra-cantonment sanitation activities and to inaugurate a venereal disease control program. And when the disastrous influenza pandemic hit the United States in 1918-19, the Congress appropriated $1 million to the Public Health Service to help suppress this disease.

In the postwar period Federal health activities languished. Then the great depression of the early thirties brought the Social Security Act, which prepared the way for wider Federal participation in public health activities. A substantial program of grants-in-aid to the States for general public health purposes was authorized. Later specialized programs for tuberculosis and venereal disease control were added.

Despite these measures the Federal investment in public health and medical research was quite meager until World War II. In 1940 for example, a year in which the Federal budget was $6.2 billion, only $3 million was spent for medical research and an additional $19 million for all other health purposes, including grants to the States.

Delivered at the centennial meeting of the Kansas Medical Society, Topeka, May, 1959. Mr. Richardson is Assistant Secretary of Health, Education, and Welfare.

World War II

At the onset of World War II, with the mass tragedy of 1918's influenza pandemic far from forgotten, there emerged a realization of the vital roles that individual and collective health could and would play in the national security. In the early days of World War II, the Federal Government quickly recognized that a healthy citizenry was vital to winning the war and that bold approaches to the prevention and cure of diseases must have stimulus as well as supplementary financial support.

In consequence the now widely used cooperative approach to medical research was evolved by universities, foundations, industries, and government at local, State, and Federal levels—a pattern that deserves to flourish for a long time to come.

The Federal Government has been participating in health problems to an increasing degree. A discussion considering government participation and responsibilities in medical research, support of medical schools and medical care facilities, and the financing of medical care.

I need not recount before this audience the dramatic medical achievements that have resulted from this cooperative approach to research during the past decade and a half. Never before in history has there been such an extraordinary accumulation of new medical knowledge and such a swift advance in technical methods and skills for the application of that knowledge.

As a result we now have in America a citizenry that is keenly interested in health and generally aware of what is available in medicine. The citizen, the consumer of the medical product, not only expects medical science to go forward at even a faster pace but also insists that the products, techniques, and skills that derive from current achievements be readily accessible to all who need them. Indeed, today the Federal Government is expected to be responsive to a degree unknown in any former time to inexorable demands for medical and public health services which no single group acting alone could ever provide and which all groups in concert can barely meet. At al-

most every point in the spectrum which has at one end the development of new knowledge in the health field and at the other the financing of medical care, the Federal Government has already assumed some degree of responsibility. That responsibility now includes participation with official and voluntary State and local agencies in the formulation of research policies in particular areas, the support of that research, aid to professional and technical education and training, assistance in the construction of new facilities and the renovation of old, help in the prevention and control of disease, consultation and funds to help institutions to effect the most fruitful utilization of scientific and teaching faculties, financial aid to improve and expand institutions devoted to research and treatment, and finally, cooperation in strengthening and complementing private and public systems of financing medical care.

We cannot, therefore (even if we were inclined to do so), start from scratch in attempting to frame legislation designed to strengthen the capacity of the Federal Government to assist in dealing with the health problems of today and tomorrow. As we see it our function is to take such additional action as may be necessary in a manner that will so far as possible preserve and strengthen the pattern of Federal, State, local, and private cooperation that has worked so well in the past. My aim this morning will thus be to show how we in the Department of Health, Education, and Welfare are attempting to apply this approach to the problems in the field of health that seem to us most urgent. In so doing I shall start with medical research, proceed from there to the needs of medical schools and related teaching institutions, describe our present thinking with regard to medical care facilities, and conclude by touching briefly on the financing of medical care.

Medical Research

Amidst all the vast array of urgently needed health, education, and welfare activities, medical research today occupies a favored position. It is the only such activity of which the sole question asked is, "How much can usefully be spent?" Although expenditures for medical research still represent only about four per cent of the Nation's total investment in research and development, such expenditures have more than doubled in the last five years. The Federal Government's share, meanwhile, has gone up by almost 300 per cent.

This phenomenal growth in the support of medical science has, of course, been fed by the very achievements of medical science. Each new discovery reinforces the public demand for still faster progress in the conquest of the cripplers and killers that are mankind's most ancient enemies. The consequences, however, for medical education and for the private agencies and organizations actively concerned with medical research, as well as for government, are so significant and far-reaching as to cry out for careful study and evaluation. To make such a study, former Secretary of Health, Education, and Welfare, Marion B. Folsom, in 1957 appointed a committee of distinguished consultants under the chairmanship of Dr. Stanhope Bayne-Jones, formerly dean of the Yale University School of Medicine and Technical Director of Research, Office of the Surgeon General of the Army. The Committee presented its report, now generally referred to as the Bayne-Jones Report, in June, 1958.

Over the past four months Secretary Flemming has devoted considerable time, with the Surgeon General of the Public Health Service, the Director of the National Institutes of Health, and their staffs, to studying the full implications of this report. He has also reviewed the data obtained from a supplementary study of 20 medical schools conducted by the National Institutes of Health.

Study of 20 Medical Schools

On the basis of these data, it has been possible to project the probable rate of growth in expenditures for medical research and to formulate as a long-range national goal for such research, a total expenditure of $1 billion by 1967. We assume, as a guide for national action, that the support of medical research should continue to be divided almost equally between Federal and non-Federal sources. It is expected, moreover, that the present pattern of support within the Federal Government will be generally maintained, with the National Institutes of Health providing most of the Federal share. This would mean an increase in NIH expenditures for research from $209 million in fiscal 1959 to an annual rate of about $350 million by 1967.

Apart from their significance in establishing long-range goals, these studies have reinforced our firm belief that research, education, and training are inherently inseparable and that a successful research and training effort for the Nation as a whole must be securely grounded upon a sound educational base. For this reason we are more concerned than ever about the urgency of immediate steps to correct the imbalance between medical research and education that has tended to result from the very magnitude of Federal research expenditures.

Our analysis has, for example, confirmed the view that the National Institutes of Health should pay not only the direct costs of any research project which they support but should also pay whatever share of indirect costs—administrative salaries, heat, light and power, maintenance of buildings, etc.—is fairly attributable to that project. Until this is done, each new project undertaken by a medical school will re-

sult in an additional drain on its operating funds, thereby weakening its capacity to carry out its teaching mission. Similarly hospital care will suffer from the diversion of uncommitted income to the support of research. We propose, therefore, at the earliest opportunity, to renew the fight to eliminate the limitation on the payment of indirect costs which for a number of years has been contained in our appropriations acts.

A related problem concerns the very considerable number of medical school and hospital personnel whose salaries are being paid in full or in part out of research grant funds. Under existing law no assurance can be given that such funds will continue to be provided in predictable amounts. The result is that no security of tenure and no firm career ladder in medical research can be offered to the men and women engaged in such projects.

To remedy this and at the same time to make possible a degree of flexibility in the allocation of research funds with a minimum of red tape, we have under consideration legislation that would authorize the allotment to the research institution of a percentage of total research appropriations on an "institutional grant" basis. To the extent in other words of, say, 15 per cent of such appropriations, we would make allotments among research institutions in a manner that did not require specific project applications and that would enable them to utilize the funds for the continuing work of their senior investigators.

Grants for Professional Training

In conjunction with its projection of future expenditures for medical research, the Bayne-Jones Report warned that the present shortages of professional and technical manpower are likely to grow even more critical as research demands increase. Larger numbers of well-trained professional people are going to be needed not only to conduct the search for new knowledge, but to bring this knowledge to our rapidly expanding population in the form of better medical care. Speaking to the latter point, the Bayne-Jones group predicted that "A minimum of 14 or as many as 20 new medical schools will have to be built (by 1970) if the existing number of physicians per 100,000 population is not to fall."

The Public Health Service, with the help of a new advisory group headed by Frank Bane, former executive director of the Council of State Governments, is now systematically studying the whole question of the need for physicians and exploring the ways in which this need may be met. This study, together with the NIH study of 20 medical schools and the Bayne-Jones Report, should provide a strong basis on which to develop national goals for medical education and research.

The Federal Government meanwhile is already making significant contributions toward the reduction of manpower shortages in the health field. The National Institutes of Health, for example, will spend this year more than $60 million in stipends for individuals preparing for careers in medical research, for the support of traineeships for persons intending to become specialists in one of the fields covered by a categorical institute, in grants to teaching institutions for the support of training courses, and for research fellowships. In addition the Public Health Service is spending $57 million for training in water pollution control activities, advanced nursing, and other public health responsibilities.

Assistance to Research and Training Institutions

All these programs—research grants, traineeships, fellowships, even training grants—amount in effect, so far as the research or teaching institution is concerned, to payments for the purchase or reimbursement of services. To the extent that such payments are applied to activities that the institution would in any case feel bound to undertake—and certainly a medical school would be obliged to support a certain amount of research even if no Federal grant program existed—they can, of course, be regarded as aid to the institution. Yet it is equally clear that the research and research-related training programs now being carried out are much larger in volume and different in character than they would be if Federal funds were not available. Indeed the programs would not be serving their purposes if this were not the case, for they were not designed primarily for the assistance of institutions. Frequently in fact, as I hope I made clear in discussing the need for the full payment of indirect costs and for institutional grants, the programs operate as burdens on the institution.

We cannot escape, therefore, the obligation to face squarely the need for more direct forms of Federal assistance to health training and research institutions. For medical schools, dental schools, and schools of public health, particularly, this need is becoming increasingly acute. As President Eisenhower stated in addressing the National Fund for Medical Education a year and a half ago:

> The rapid accumulation of new medical knowledge is flooding in like a tide in the Bay of Fundy. There is on all sides a mounting demand for health services by our communities. Under these demands the medical schools in America today face inherited responsibilities beyond what they are financially able to meet. The medical progress of which we are so justly proud has involved these teaching institutions in a struggle for solvency and survival.
>
> The constantly widening scope and complexity of medical education has, within the space of a few decades, quadrupled the cost of producing a qualified

doctor. Tuition now pays but one-fifth of the student's total education cost.

Accordingly, there is today a great gap to close, the gap between the ceiling of medical school receipts from all sources and the racing increase in costs of teaching, research, and medical care.

Under present law the only Federal program that does provide direct help to medical schools and kindred institutions is the program of matching funds for the construction of research facilities. First enacted in 1956 and extended last year until 1961, this program authorizes expenditures up to $30 million a year for buildings used in the actual conduct of research or for that part of a building to be devoted to research, but not for buildings or parts of buildings used for teaching or administration. Although authority to make grants for the latter purpose has been advocated by the Administration in each of the last three years, the Congress has not yet seen fit to grant it. Budgetary considerations permitting, we shall probably try again. Next time, however, we may modify our earlier proposals by suggesting that grants be restricted to buildings needed in order to expand enrollments or to prevent their reduction.

So far as outright Federal grants for operating purposes are concerned, the only beneficiaries at the present time are the eleven schools of public health. In recognition of the fact that most of their graduates enter public service, Congress last year passed a bill authorizing grants to these schools in an aggregate amount of a million dollars a year. The act was limited to two years in duration and therefore expires in 1960. Assuming that it is to be extended, should it be confined to the schools of public health, be modified so as to restrict it to the support of special projects in public health training, or be expanded to include other types of teaching institutions in the health field? In other words should its significance as a precedent be ignored, brought more nearly into line with the NIH training grant programs, or extended? Most of us in HEW, it is fair to say, especially those of us who have been wrestling with the needs of higher education as a whole, would hesitate long before recommending the latter step.

Aid to Institutions Providing Patient Care

New weapons in the war against disease and training in their use are of little avail if we lack the facilities with which to employ them in caring for the sick. So great has been the need for such facilities, first as a result of the wartime deferment of construction and now because of the population boom, that the Federal Government has for more than ten years been playing a major part in a nationwide cooperative program designed to meet this need. The Hill-Burton Act, which created the hospital survey and construction program in 1948, has been a tremendous success, particularly in building general hospitals. And yet most of the gain in new beds has been offset by increases in population, by obsolescence, and by the abandonment of old facilities as new facilities are constructed. Like Alice and the Red Queen, we have had to run like blazes to stay in the same place.

Eleven years ago we had about 60 per cent of the general hospital beds we needed. Today with the help of almost a billion dollars in Federal funds and more than two billion dollars in State, local, and private matching funds, 75 per cent of the need for general hospital beds has been met. In addition we now have 73 per cent of the tuberculosis beds needed, as compared with 46 per cent in 1948. In mental hospital beds we have slipped from 55 per cent of need in 1948 to 53 per cent today. All in all State plans show a remaining deficit for 888,000 hospital beds of all types and 323,000 nursing home beds.

Hospital Costs Spiral Higher

An equally pressing problem has been the rapid upward spiral in the costs of hospital care, more than 179 per cent in a decade. The search for means of combatting this rise has been a central purpose in the allocation of research and demonstration project funds, $1,200,000 annually, under the Hill-Burton program. In our view the results of experimentation in "progressive patient care" are particularly promising. This, as most of you undoubtedly know, is a pattern of services making use both of physical facilities and of medical and nursing personnel in the manner best suited to the needs of the individual patient. It includes intensive care for critically ill patients, intermediate care for those requiring a moderate amount of service, self care in a hotel type of setting for ambulatory patients, and long-term care for the chronically ill in a homelike atmosphere with periodic evaluation of progress and rehabilitation.

Concern with the high cost of hospitalization also underlies much of our recent thinking with respect to improvements in the Hill-Burton program. In this connection we are laying particular stress on finding ways and means of making the diagnostic and treatment center category of the program more useful. As the Hill-Burton Act now stands, we can make grants for the construction of such centers only where the center is formally affiliated with a hospital. Although we have considered the complete elimination of this requirement, our present view is that it should be removed only for mental health clinics and diagnostic and treatment centers in remote areas.

Lack of Out-of-Hospital Insurance

The limitations of the Hill-Burton Act, however, are not the major barrier to the construction of more facilities for outpatient services. More important is the lack of readily available insurance against the cost

of out-of-hospital care and treatment. It is heartening, therefore, that the health insurance industry has this problem under intensive study and has already taken a number of experimental steps toward providing such insurance. In addition to major medical expense insurance, which from its inception has been applicable to the costs of medical care wherever it may be provided, many insurance companies as well as Blue Shield plans now offer coverage against the costs of physicians' services in the home or office. Meanwhile we are continuing to search for ways of encouraging faster progress in this direction.

So far as facilities for acute care are concerned, the principal contribution of the Hill-Burton program has been toward the construction of *new* hospitals. Rural communities altogether lacking in hospital beds have been the chief beneficiaries. Needed in addition, however, is some form of assistance in financing the cost of repair and modernization of existing hospitals in urban areas. Several approaches to meeting this need are possible—earmarked grants, direct low-interest loans, mortgage insurance, or some combination of the three. These approaches are all under study in the Department. In addition we believe that we should continue to emphasize the importance of experimentation in measures designed to reduce the cost of hospitalization. For this purpose we are considering an expansion of the research and demonstration authority of the Hill-Burton program so as to provide for direct grants—grants, in other words, not included in State allotments—for the building of experimental structures.

One other amendment to the Hill-Burton program that we expect to propose is motivated both by the aim of avoiding unnecessary hospitalization in high-cost institutions and by awareness of the continuing increase in the number of the aged. This amendment would consolidate the chronic-disease hospital and nursing-home categories of the program into a new "long-term care facilities" category and increase the authorized appropriations for this category. For similar reasons we also support the provision in the pending housing bill of mortgage insurance for proprietary nursing home construction, with assurance through State licensing agencies of adequate standards of care.

Disease Prevention Programs

Disease prevention programs are fundamental activities of the U. S. Public Health Service in cooperation with State and local health departments. Although the acute communicable diseases have declined in prevalence, keeping them under control requires unrelenting vigilance. Yet the very success of public health techniques in curbing the acute contagions has been accompanied by a steady rise in the chronic diseases, especially those of the heart and arteries, cancer, diabetes, and the debilitating disorders peculiar to old age. Research and epidemiological investigations into their causes, incidence, and cure are being conducted on a wide scale. So far as prevention is concerned, the greatest unmet need is in health education. Our efforts in this direction need intensification and, if possible, the application of more vigor and imagination.

High priority among preventive health activities must also be given to the problem of maintaining a healthy physical environment. Modern technology, urban growth, and industrialization are daily making this problem more acute. Water pollution, waste disposal, food and drug contamination, smoke and smog, and nuclear fall-out present hazards to health, the seriousness of which is not yet fully known. Radiation hazards in particular demand a comprehensive approach, and the Budget Bureau now has under study the relative responsibilities of the Public Health Service and the Atomic Energy Commission in this field. In addition we in the Department of Health, Education, and Welfare are considering the possible need for some form of assistance to the States in the exercise of their radiological health responsibilities.

Financing the Costs of Medical Care

Even after new knowledge has been won, doctors have been trained, facilities have been built, and everything possible has been done to prevent disease, there remains the problem of paying for medical care. Although we have reached new heights of prosperity in the United States, medical costs represent a serious problem to many American families. In 1957 for example, 44 per cent of all families in this country had incomes below $5,000 and one family in nine had an income below $2,000. As many as one-quarter of all American families today have no cash savings, and in 1958 it was estimated that more than half of our families had savings of less than $500. For these people the costs of long-term and other disabling illness can be a crushing burden, particularly if the victim is the breadwinner.

For most people voluntary health insurance represents the best means of meeting the costs of medical care. Preliminary estimates for December, 1958, show that just over 121 million people, or 70 per cent of the population, then had some form of hospital insurance. Ten years earlier in December, 1947, the 53 million persons with such protection represented 37 per cent of the total population.

There are, however, serious gaps in coverage of our older citizens, less than half of whom have any kind of health insurance. Summarizing an intensive study of this subject for the House Committee on Ways and Means, the Department of Health, Education and Welfare last month reported:

(Continued on page 409)

Severe Early Deafness

Its Effect Upon an Individual's Mental and Emotional Well-being

C. P. GOETZINGER, Ph.D. *and* G. O. PROUD, M.D., *Kansas City*

The effects of severe deafness upon an individual, whether it be congenital or acquired soon after birth, is not understood by the general public and only vaguely by specialists not directly associated with the problems of the deaf. When one stops to consider that the deaf as a group probably number about 200,000 in this country—a rather small minority—it is not surprising that such is the case. Irrespective of this situation, the family physician, as the first to be consulted by the family when a child fails to develop speech, should possess general information relative to the impact of severe early deafness.

This paper acquaints the general practitioner with the historical background of the education of the deaf and the effects of deafness upon an individual's mental and emotional well-being.

Historical Background

According to historians,[8] the evolution of the social attitude toward the deaf paralleled in many respects man's general attitude toward his fellowman. Although only scattered references to the deaf are found in history prior to the 16th Century; nevertheless, they afford information from which a general philosophy may be inferred. Thus it was that in the pre-Christian era, the deaf were regarded as relatively incapable of learning, since the primary medium for the reception of speech, and consequently for formulating thought, was non-functional. Being unable to either receive or send information and thought in the conventional manner—that is, through hearing and speech—the deaf were therefore exceptionally poor educational risks.

In like manner the Hebrew and later the Christian writers, conditioned by the tenor of the times, considered the deaf as childlike and of poor mental competence, but strongly urged compassion toward them. It was not, however, until the Seventh Century that any known reference was made to the education of the deaf. Bishop John of York was reported by St. Bede as having successfully taught a deaf man to talk.

That there was an awareness of the difference between congenital and acquired deafness is apparent from the Justinian Code of the Sixth Century which excluded certain civil rights to those born deaf, while granting them to those with acquired deafness.

With the advent of the 16th Century, a new philosophy of the deaf began to emerge. Though the effects of a succession of pioneers—such as Cardano of Padua, Ponce de Leon and Bonet of Spain, William Holder and his contemporary Wallace, Bulwer of England, Amman of Holland, Dalgarno, St. Francis de Sales of Switzerland, and others—publications concerned with methods for teaching the deaf and their educability began to appear. The tide relative to the education of the deaf might truly be said to have turned in the 18th Century under the influence of two men, the Abbe de l'Epee, founder of the first public school for the deaf in Paris in 1857, and Samuel Heineicke of Germany. Although these men were at opposite poles regarding methodology; nevertheless, their prolific writings did much toward putting the education of the deaf on a universal basis.

The first permanent school for the deaf in this country was founded at Hartford, Connecticut, by Thomas Hopkins Gallaudet. His son, Edward Minor Gallaudet, was subsequently instrumental in the founding of the first and only college for the deaf in the world at Washington, D. C.

Among the pioneers in the education of the deaf in the United States are other illustrious names—such as Alexander Graham Bell, the inventor of the telephone, Sarah Fuller, and Carolyn Yale. In addition there are a host of men whose names seldom, if ever, appear in the recent erudite tomes which have been written about deafness, but who nonetheless, though their contributions remain largely unsung, rank high in the annals of the education of the deaf in this country. We refer to that substantial group of deaf men, who in the face of insurmountable odds, founded or were key figures in founding many of the schools in the United States.[13]

With this brief historical summary in mind, we now turn to the forerunners of psychological investigation of the deaf in this country.

From the Department of Otorhinolaryngology and Hearing and Speech of the University of Kansas School of Medicine.

Capacity of the Deaf

It may come as a surprise to learn that psychological examination of deaf children was suggested by Greenberger in 1889. He proposed that picture books and a number test be used to eliminate the feebleminded from schools. He also advocated block building and the perception of form and color as tests of a child's ability. To quote:

> Building with blocks, arranging with sticks so as to make certain forms, or any childish game can be made the means of finding out whether an applicant is capable of fixing his attention upon a subject, and whether he has any reasoning faculties.[16]

With a few minor changes in the above wording, one wonders if it might not be mistaken readily as a passage from one of our recent textbooks.

Eight years later in 1897, Taylor reported the results of a free association spelling test which was administered to both deaf and hearing children. The deaf children manifested a superiority. A few other studies—such as those by Mott in 1899 and 1900, by Smith in 1903, and by MacMillan and Bruner in 1906—round out what might be termed the pre-Pintner era. The last mentioned study probably represents the first attempt to use standardized tests with deaf children.

After the Goddard revision of the Binet-Simon Scale had been introduced, Kilpatrick was the first to suggest its use or some modification of the test with deaf children. He further urged that a commission be appointed to study the problem. Kilpatrick did not himself attempt a modification of the scale.

After concluding that the Binet Scale, as it stood, was not suited for measuring the intelligence of the deaf, Pintner and his associates began a series of studies of children in schools for the deaf which encompassed intelligence, language, etc. In addition Pintner developed his group non-language mental test, the Pintner Educational Achievement Test, and a Performance Scale. Summarizing their investigations for the period 1914-1918, which involved principally the evaluation of the intelligence of deaf children with the Digit-Symbol Symbol-Digit Tests, the measurement of language ability with the Trabue Scales, and the measurement of memory span for digits, Pintner and Paterson[30] concluded:

1. That the Binet Scale, as it stood, was unsuitable for use with the deaf;
2. That the average orally taught pupils were superior to those manually taught because the bright students were picked for oral instruction;
3. That on mental tests, not dependent on hearing, the average deaf child was from two to three years retarded when compared to the hearing child;
4. That on tests which involve the auditory processes, as memory span for digits and language scales, the average deaf child, irrespective of age, is equal only to the hearing child of seven, eight, or nine years;
5. That there are no sex differences between the deaf;
6. And that there appears to be no difference between the congenital and adventitious deaf child, although on tests which are dependent on audition, those children who lose their hearing after the age of four or five seem to benefit because of having once heard.

These results, therefore, which had involved several thousand children, appeared to offer evidence that the deaf were retarded mentally. Only one study, and that by Newlee a year later in 1919, offered contrary findings. Employing the same Digit-Symbol Symbol-Digit Tests as previously used by Pintner and Paterson, Newlee found her 85 deaf subjects to be the equal of hearing children.[27] The findings, however, were criticized on the basis of selectivity of sample and the small number of cases.

The next step in the psychological testing of the deaf child was the Reamer Survey. This study was reported in 1921. Reamer published results on 2,172 subjects. The aforementioned Pintner Non-Language Mental Test and the Pintner Educational Survey Test were used. In addition the subjects were differentiated as to degree of hearing loss. The audiometer was not yet commercially available. It appeared, however, that Reamer separated her subjects by means of a voice test.

Reamer's findings essentially confirmed the earlier results of Pintner and Paterson. Her deaf subjects showed an average two-year mental retardation and a five-year educational deficit. Children who had retained their hearing until the age of six manifested a definite advantage in educational achievement. Further, there was *practically* no difference between the mental and educational achievement of the partially and totally deaf, whether deafness was congenital or acquired.

Finally, the National Research Council Survey of 1924-1925, reported by Day, Fusfeld, and Pintner, provided more evidence with regard to the mental and educational status of the deaf. This investigation involved 41 schools and 4,432 subjects ranging in age from 12 to 21 years. Again the two Pintner tests were used. The analysis of the data consisted of comparisons between the deaf and the hearing for the age range 12 to 15 years inclusive, between the adventitously and the congenitally deaf, between day schools and residential schools, and between methods of instruction. Also the subjects had received hearing tests with the 3-A audiometer,* and could therefore

* The 3-A audiometer produced a complex signal, not pure tones.

be classified relative to degree of hearing loss.

In short the findings substantiated the previously reported mental and educational retardation of the deaf. With reference to the type of schools, the authors felt that the day schools were making better use of their material. The day schools, however, had a greater percentage of bright pupils and the degree of hearing loss was less. No method was found to be superior to the other.

In 1928 Upshall reworked the data of the National Education Survey. He matched 311 institutional and day school children on several variables. In an important sub-study he equated 83 subjects for chronological age, mental age, degree of deafness and onset of deafness, and controlled statistically, years spent in school and age at school entrance. Furthermore, economic status of the homes from which the children came was rated by the Barr Scale. Among other things he concluded that the day school children were significantly superior to the residential school children. He was inclined, however, to attribute the superiority to better teaching, rather than to differences in methods of teaching.

In the same year, 1928, Drever and Collins in England with their own performance test of intelligence found their deaf subjects to be equal to, or better than, the hearing. These results were in conflict with previous studies, with the exception of the Newlee investigation, and therefore, triggered a chain of studies using the performance type test as opposed to the paper and pencil non-language examination. Two early experiments in particular, showed that deaf children, who were retarded about two years in mental ability on the Pintner Non-Language Scale, to be less than a year retarded on performance tests.[22,24]

In the ensuing years a rather impressive amount of research has indicated the deaf *to be normal, or within normal limits, intellectually when performances scales are utilized.*[2,12,15] When paper and pencil type tests are used, including the Goodenough Draw-a-Man Test, there are conflicting findings.[7,11,24,38]

The divergency of the findings between the paper-and-pencil tests and the performances scales has been a matter of great concern to psychologists of the deaf. It is not possible to discuss here all the ramifications of this problem. However, McKane, after having administered the Pintner Non-Language Mental Test and the Grace Arthur Performance Scale (Form I) to the same group of deaf children, concluded that the tests measured different abilities. More recently, Oleron, and Zeckel and Van der Kolk, as a result of their studies with the Raven's Matrices and Porteus Mazes respectively, have maintained that the deaf are inferior in abstract ability. In accord with the intelligence tests results are those of Heider and Heider, Larr, and McKay in conceptual ability. Then Templin found the deaf to be retarded in explanations of the causes of physical phenomena. Furthermore, the retardation was related to the degree of deafness and the age at onset.

Non-Language Tests

That the non-language and non-verbal tests on the whole are more abstract than the performance scales seems clear. A picture of an apple is more abstract than either a model of an apple or the apple itself. Again, tactual and kinesthetic factors may aid in the solution of performance tasks, whereas such factors do not have a chance to operate in the paper-and-pencil tests. Insofar as conceptualization is concerned, higher levels are probably abetted by symbolic activity as in thought. Thus when there is circumscribed thought contingent upon restricted language development, concept formation does not attain full fruition.

Oleron found the adventitiously deaf to be superior to the congenitally deaf, which is what would be expected in view of the above explanation. Oleron rejects the idea that the inferiority of his deaf subjects proceeded from the cause of deafness or from some factor linked to the cause. He maintained that, while the cause of deafness might operate in some cases, it does not operate on a general scale. Illnesses, he felt, do not explain why the deaf succeed in concrete things.

Reamer's comparisons of the adventitious and congenital deaf show that at all age levels the medians of the former, both total and partial, are above those of the latter. An inspection of Reamer's graphs shows a noticeable rise at age eight in the mental indices of the adventitiously deaf. There is an initial rise at age six followed by a drop at age seven, then a rise at eight which continues to eleven. After age 11.2 there are both rises and drops, but since the number of cases were relatively few, little or no significance can be attached to the curve at this level. This finding again is consistent with the previous discussion.

Brill and Orman studied the ability of deaf children to remember sentences. They concluded:

> . . . that lack of memory for sentences is part of the over-all language handicap of deaf children, and while this specific skill can be improved to some extent by specific training, real and lasting improvement seems to be influenced by other educational factors. Probably only a raising of the total language ability of the deaf child will bring lasting improvement in his memory for sentences.[5]

Later Blair[3] gave a series of memory tests to both deaf and hearing children matched for intelligence,

age, and sex. He found his deaf subjects did as well, or better, on memory tasks which were primarily at a perceptual level, but they were decidedly inferior on memory span tasks requiring mental abstraction or conceptualization. Perceptual functioning is lower in the hierarchy of cognitive behavior than conceptualization. But it is only through language that the full potential of the mind is to be realized. When words and sentences, the tools of language, are improperly or, as it were, poorly assimilated, meanings and concepts to which they give birth are somewhat vague and ill-defined. It follows then that the deaf may be expected to show a deficiency in concept formation, not by virtue of any innate inferiority, but by reason of their lower rate of language growth.

When one stops to consider the laborious manner in which language must be acquired with the auditory channel non-functional from birth, it is indeed remarkable that some of the differences are not greater. In spite of the deprivation of the auditory sense, there are a host of deaf men and women who have risen to the highest levels of conceptualization, if their positions in society and what they have accomplished is any index of their level of mental functioning.

Until now we have dwelled upon the intelligence of the deaf. From the historical point of view this area has perhaps received more attention than any other. It will continue to receive attention in order to more clearly define potential capacity. If potential is present, then more efficient ways and procedure for developing it must be utilized and devised.

Adjustment of the Deaf

A rather large number of investigations have been directed toward the adjustment of the deaf. A variety of research tools, such as paper-and-pencil personality tests, adjustment inventories, behavioral rating scales, devices for measuring level of aspiration, and projectives techniques have been used in the process. The impact of severe deafness upon the social and emotional well-being of an individual could be expected to produce traumatizing effects. Some authorities contend, not without justification, that the loss of hearing later in life has a more marked effect upon personality and adjustment.[2,7] A recent study of Gallaudet College students would appear to indicate that the opposite is the case. In other words the longer one has hearing, the better are his chances of adjustment.

Meyerson, after reviewing the literature concerned with the adjustment of the deaf, concluded that much of what has been reported must be regarded with caution because of the lack of adequate controls, language connotations of the test materials, etc. in many of the studies. As a general finding, investigators who have employed paper-and-pencil tests of personality have indicated the deaf child to be more neurotic, less stable emotionally, and more poorly adjusted than his hearing counterpart. In the few studies in which the Rorschach has been utilized with deaf children, there is agreement that deaf children in institutions present a picture of rigidity and of neuroticism somewhat like the rigid, neurotic, normal hearing child of similar age.

In an unpublished study which was done at the Berkeley, California, School for the Deaf some 10 years ago, Inman and Robinson administered the Rorschach Test to a group of 25 deaf children in the advanced department. One of us, in addition, had given the Wechsler Performance Scale (Form 2), selected pictures from the Murray Thematic Apperception Test and the Bender Gestalt Designs. The basic data of the group which consisted of eight boys and 16 girls were as follows:

	Range	*Mean*
Chronological Age	17-21 years	19.1
Years in School	9-15 years	13.3
Degree of Hearing Loss	67-100 per cent	82.8
Age at Hearing Loss	Birth-3 years	11 months
IQ	87-118	103.4

In addition to these data, the teachers were interviewed relative to the adjustment of the subjects and their school ability. Standard Achievement results were also available.

The tentative conclusion reached as a result of this pilot study was that the personality of this deaf sample could be reasonably well assessed by the aforementioned battery, that the deaf gave evidences of rigidity in their responses, but that in no instance was there evidence of psychopathic behavior. The authors furthermore felt that this type of personality evaluation was significantly related to intelligence quotient and to social and scholastic levels.

With regard to the Haggerty-Olson-Wickman Behavior Rating Schedules, Buchard and Myklebust found deaf subjects who had been in a residential school in residence more than four years to have more behavioral problems than those who had been in residence less than four years. Springer, however, did not find significant differences between a group of hearing impaired children and normal hearing children when matched for age, intelligence, and socioeconomic level.

Several investigators have utilized the Vineland Social Maturity Scale. Avery reported that 50 hearing impaired children ranging in age from 10 months to six years evinced normal social maturity when rated with standard procedure, and slightly above average

when allowance for deafness was made. The children were in a residential school and day programs for the deaf.

Both Bradway and Buchard and Myklebust found children in a residential school for the deaf for the age range five to twenty-one to be retarded in social maturity. The latter investigators likewise reported more retardation in children who had been in residence four years or more as compared to these who had been in residence less than four years. Streng and Kirk, on the other hand, obtained an average social quotient of 96 for hearing impaired children in a day school.

Experiments on the rigidity of deaf children, as well as their level of aspiration, appear to depend on the nature of the task.[7] In some situations the deaf child manifests more rigidity than the hearing child. In other situations there is no difference. Again tasks which penalize the deaf child affect his level of aspiration. Otherwise he does not differ from the hearing child.

With reference to the adult deaf, the results of Myklebust with Gallaudet College students have been cited. To reiterate, adjustment was related to age at onset of deafness. The later the onset, the better was the adjustment.

In Fusfeld's excellent article dealing with the counseling of the adult deaf, findings of Crammette and Friedman, who investigated the traits of deaf adolescents and young deaf adults from the point of view of outstanding deaf persons are summarized. On the negative side the traits most prominent were the following: poor cooperation with others, too much dependence on others, attitudes that they deserve aid, a limited viewpoint, and limited interests. Other negative aspects observed, but not so pronounced, were the following: lack of social responsibility and egocentrism, feelings of not being treated fairly, emotional instability, and a lack of the social graces.

Fusfeld points out that, on the whole, the above picture is consonant with psychological studies of the deaf. On the positive side, however, the deaf possess many laudable characteristics as revealed by the same study. That is to say that, on the average, the deaf are good law-abiding citizens, are group conscious, and work assiduously to defend their rights, are prompt, and apply themselves well on the job, and are *free from race and creed prejudices.*

That many of the negative characteristics associated with the deaf are the result of environment and training is certainly suggested by the literature. Thus Levine who studied 31 adolescent girls in a residential school for the deaf found atypical and immature responses as compared to the normal, but interpreted the results as being representative of adequate adjustment in terms of the particular environmental setting.

Severe deafness, it cannot be denied, imposes a tremendous barrier to adequate adjustment. However, the legions of deaf men and women who have contributed in countless ways to society is a glowing testimony of the fact that the deaf do surmount their handicap. To maintain that deafness leaves no residual effects which cannot be erased, or that all things being equal with the exception of deafness, there are no differences between the deaf and the hearing, would appear unrealistic in view of what is known about the processes of development.

In a recent study Fusfeld had over 100 young deaf adults of both sexes list the advantages and disadvantages of deafness. The disadvantages were numerous and included restrictions such as inability to hear warning sounds, the absence of ordinary social mingling with other people, limitations of speed of learning and educational opportunities outside of the school, vocational problems as related to employer reluctance to hire the deaf, feelings of inadequacy and a sense of frustration, and inability to enjoy music and recreations dependent on hearing.

The advantages enumerated were freedom from discordant sounds, thus contributing to mental rest and repose, the development of enduring friendships as well as numerous social and recreational activities, better educational opportunities, inner poise and contentment, aesthetic values from sensitivity to vibrations and "the harmony of rhythm in the phenomena of action in the life around them." Although the disadvantages of deafness, as listed, outweigh the advantages, nevertheless as Fusfeld has stated:

> . . . the deaf on the whole offer a satisfactory social picture. They attain to wholesome, adequate maturity; they establish homes of satisfying standards; they hold a successful place in the occupational world, given the opportunity, and often in the face of prejudice and blocking; they have a strong group consciousness; they manifest a zest for life in recreation and in travel; they maintain religious affiliation and even have their own religious organizations; they record well in intellectual and scientific accomplishments; they achieve highly in the realm of the aesthetic, as in art. In short, they make good citizens.

With reference to the last sentence, perhaps we should recall a controversy which occurred in this country in the middle of the last century.[13] Mr. John J. Flourney, the founder of the Georgia School for the Deaf, apparently a man of considerable means and influence, proposed the establishment of a commonwealth for the deaf in the western part of the country. To say that the deaf of the country rose up in arms against such a proposal would be to put it mildly. The editorials, articles, etc. by the deaf that

appeared condemning such an idea left no doubt as to where the deaf stood in their allegiance. Good citizens then, as now. Of that there can be no doubt.

Summary

1. Severe early deafness imposes a tremendous barrier to the acquisition of language. Hence, many of the early philosophers looked upon the deaf as poor educational risks.

2. The mental capacity of the deaf is found to be within normal limits when performance scales of intelligence are used. On the other hand there are conflicting results when non-verbal paper-and-pencil tests are employed. The general retardation of the deaf in language ability is a possible reason for the discrepancy in test results.

3. Much of the research with reference to the adjustment of the deaf, here indicated that they are not as well adjusted as the average hearing person. On the whole, however, they adjust favorably and make good citizens when given the opportunity. The deaf are remarkably free of race and creed biases.

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Bibliography

1. Avery, C. B.: The social competence of pre-school acoustically handicapped children. Journal of Exceptional Children 15:71-73, 1948.

2. Barker, R. G.; Wright, B. A.; Meyerson, L., and Gonick, M.: Adjustment of physical handicap and illness: A survey of the social psychology of physique and disability. Bulletin 55, Revised 1953. New York: Social Science Research Council, 1953.

3. Blair, F. X.: A study of the visual memory of deaf and hearing children. American Annals of the Deaf 102:254-263, 1957.

4. Bradway, K. P.: The social competence of deaf children. American Annals of the Deaf 82:122-140, 1937.

5. Brill, R. G., and Orman, J. M.: An experiment in the training of deaf children in memory span for sentences. American Annals of the Deaf 97:270-279, 1953.

6. Buchard, E. M., and Myklebust, H. R.: A comparison of congenital and adventitious deafness with respect to its effects on intelligence, personality, and social maturity. American Annals of the Deaf 87:140-152, 1942.

7. Cruickshank, W. M.: Psychology of Exceptional Children and Youth. Englewoods Cliffs, N. J., Prentice-Hall, Inc., 1955.

8. Davis, H.: Hearing and Deafness. New York, Rinehart Books, Inc., 1947.

9. Day, H.; Fusfeld, I. S., and Pintner, R.: A Survey of American Schools for the Deaf. Washington, D. C., The National Research Council, 1928.

10. Drever, J., and Collins, M.: Performance Test of Intelligence. London, Oliver and Boyd, 1936.

11. Ewing, A. W.: Educational Guidance and the Deaf Child. Washington, D. C., The Volta Bureau, 1954.

12. Frampton, M. E., and Gall, E. D.: Special Education for the Exceptional, Vol. II, The Physical Handicapped and Special Health Problems. Boston, Porter Sargent Publisher, 1955.

13. Goetzinger, C. P.: Deaf men who founded schools for the deaf in the United States. The California News 62:-25-28, 41-44, 1946; 62:57-59, 73-75, 89-92, 1947.

14. Goetzinger, C. P.: Relationship Between School Achievement and Intelligence Test Data for Deaf Adolescents. Unpublished Master's Thesis, University of California, Berkeley, 1950.

15. Goetzinger, C. P., and Rousey, C. L.: A study of the Wechsler Performance Scale (Form II) and the Knox Cube Test with deaf adolescents. American Annals of the Deaf 102:388-398, 1957.

16. Greenberger, D.: Doubtful cases. American Annals of the Deaf 34:93-99, 1889.

17. Heider, F., and Heider, G. M.: Studies in the psychology of the deaf. Psychological Monographs, 12:1-158, 1940; 13:1-148, 1941.

18. Inman, J., and Robinson, E.: The use of the Rorschach, the T.A.T., and the Bender Visual Gestalt Tests with the deaf. Unpublished Study, California School for the Deaf, 1949.

19. Kilpatrick, W. M.: Comparative Tests. American Annals of the Deaf 17:427-428, 1912; 19:394-398, 1914.

20. Larr, A. L.: Perceptual and conceptual abilities of residential school deaf children. Journal of the International Council for Exceptional Children 23:63, 1956.

21. Levine, E. S.: An Investigation Into the Personality of Normal Deaf Adolescent Girls. Doctoral Dissertation, New York University, 1948. University Microfilms No. 1156.

22. Lyons, V. M., et al.: Report of the 1931 Survey of the Illinois School for the Deaf. American Annals of the Deaf 78:157-175, 1933.

23. MacMillan, D. P., and Bruner, F. G.: Experimental studies of deaf children. Special Report of the Department of Child Study and Pedagogical Investigation. Chicago, Chicago Public Schools, 1906.

24. MacKane, K.: A comparison of the intelligence of deaf and hearing children. Teachers College Contributions to Education, No. 585. New York, Teachers College, Columbia University, 1932.

25. McKay, E. E.: An Exploratory Study of the Psychological Effects of a Severe Hearing Impairment. Unpublished Doctoral Dissertation, Syracuse University, 1952.

26. Mott, A. J.: A comparison of deaf and hearing children. American Annals of the Deaf 44:401-412, 1899; 45:33-39, 1900.

27. Newlee, C. E.: A report of learning tests with deaf children. Volta Review 21:216-223, 1919.

28. Oleron, P. A.: A study of the intelligence of the deaf. American Annals of the Deaf 95:179-195, 1950.

29. Pintner, R., and Paterson, D.: The Binet Scale and the deaf child. Journal of Educational Psychology 6:201-210, 1915.

30. Pintner, R., and Paterson, D.: Some conclusions from psychological tests of the deaf. Volta Review 20:-10-13, 1918.

31. Reamer, J. C.: Mental and educational measurements of the deaf. Psychological Monographs, No. 132. Princeton, N. J., The Psychological Review Company, 1921.

32. Smith, J. L.: Mental characteristics of pupils. American Annals of the Deaf 48:248-268, 1903.

33. Springer, N.: A comparative study of the intelligence of a group of deaf and hard of hearing children. American Annals of the Deaf 83:138-152, 1938.

34. Streng, A., and Kirk, S. A.: The social competence of deaf and hard-of-hearing children in a public day school. American Annals of the Deaf 83:244-254, 1938.

35. Taylor, H.: A spelling test. American Annals of the Deaf 42:364-369, 1897.

36. Templin, M.: A qualitative analysis of explanations of physical causality. American Annals of the Deaf 99:-252-269, 351-362, 1954.

37. Upshall, C. C.: Day schools vs. institutions for the deaf. Teachers College Contributions to Education, No. 389. New York, Teachers College, Columbia University, 1929.

38. Zeckel, A., and Van der Kolk, J.: A Comparative Intelligence Test of Groups of Children Born Deaf and of Good Hearing. American Annals of the Deaf 84:114-123, 1939.

Committee
REPORTS

Tuberculosis in Kansas

Part III—The Current Treatment of Pulmonary Tuberculosis

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The development of effective antituberculous drugs has produced changes in every aspect of the treatment of tuberculosis, and these changes are still being constantly revised. Comparison of different methods of handling this chronic disease can often be made only in retrospect, after years in some cases. The status of his contacts must be considered, as well as the status of the patient, in assessing the success of methods of management. Features of pulmonary tuberculosis which set it apart from most other diseases are its infectivity, its chronicity, and a tendency to relapse clinically or bacteriologically without symptoms. These features frequently have widespread social implications.

The first decision to be made in considering a tuberculous suspect is whether treatment is necessary or not. Active tuberculosis demands treatment, but occasionally it takes some time to decide whether activity is present. Serial chest x-rays and bacteriologic study of sputum are the most useful methods of resolving any doubt. Prolonged observation may be required before a decision can be reached. It is dangerous to reach more than a tentative conclusion of inactivity on a single chest x-ray. It is by no means unusual to examine several sputum specimens before finding one positive for tubercle bacilli. A positive sputum certainly indicates activity, as does a changing x-ray, whether deteriorating or improving. When activity is in doubt, the patient may require hospital admission for further study, both to protect others and to allow diagnostic procedures such as gastric lavage to be conducted.

Although several findings can be accepted as definite indications that treatment is necessary, there

The Kansas Medical Society's Committee on Control of Tuberculosis this past year has prepared a series of four articles intended to orient the physician with the current status of the diagnosis, treatment, and follow-up of patients with tuberculosis. Dr. Martin FitzPatrick served as editor of these four articles which are now appearing in serial form in the *Journal*, following which they will be bound and made available in booklet form to each member of the Society.

Drs. Brooker, Fulton, Loudon, and Taylor's article is the third in a series of four by the Committee on Control of Tuberculosis. The final article will appear in the next issue of the JOURNAL.

is no one finding which rules out the necessity for treatment. The NTA standards for classifications of activity are useful mainly as an assessment of the progress of a patient toward a smaller risk of relapse. "Inactive" does not mean that every tubercle bacillus which the patient harbored has died. More often it describes a rather uneasy symbiosis characteristic of chronic pulmonary tuberculosis.

The methods of treatment of tuberculosis available at present include drugs, rest, surgical excision, and collapse therapy. Treatment can be carried out in a hospital, at home, or with the patient at work; most frequently drugs are given in all three situations in succession. Considerable pressure may be put on the physician by patients, relatives, and economic or social circumstances to reduce the period spent in a hospital or resting at home, or even to omit these phases altogether. The physician's ability to resist these pressures and overcome refusals will increase his success in treatment, and perhaps even eventually his popularity.

Every patient with positive bacteriology should be admitted to a hospital, and the more often exceptions are made to this rule, the longer will tuberculosis be a problem. It should be obvious that the sputum positive patient who has never had a sputum test is at least as dangerous as the patient who knows that he is positive.

Every newly diagnosed case of pulmonary tuberculosis requiring treatment, benefits from an initial period in a hospital. A more accurate evaluation of his disease can be made, clinically, bacteriologically, and radiologically. He can gain more knowledge and understanding of his own disease and may be encouraged and sometimes warned by observing other patients. He has the advantage that a closer watch can be kept on his response to drugs. And he cannot infect his family and friends.

Drugs are now the most important items in the treatment of tuberculosis. They have made treatment more successful, but more complicated, more dependent on technical procedures. The three best drugs at the present time are Streptomycin, PAS, and Isoniazid. The most important fact about drugs is that tubercle bacilli can develop resistance to them, and this resistance is, for all practical purposes, permanent. The development of resistant organisms is a disaster to a patient, and sets back the treatment of his disease to the era preceding chemotherapy.

Several of the factors related to the development of drug resistance have been discovered.

(1) The average patient's organisms will become resistant to one drug, given alone, within a few months.

(2) The more tubercle bacilli his body contains, the more probably and the more rapidly will drug-resistant organisms emerge.

(3) If two or more drugs to which the patient's organisms are sensitive are given in adequate dosage in combination, the development of resistance is made much less likely.

(4) If a patient's organisms are resistant to a drug, that drug may cause toxic effects but cannot help the patient, except occasionally in the case of isoniazid, and will not delay the emergence of organisms resistant to a companion drug.

The disaster of bacterial resistance may arise in several ways. The patient may have been infected originally with resistant organisms. The prevalence of primary resistance of this type is likely to increase in the future. A patient whose organisms are primarily resistant to one drug may be made resistant to others by being given a combination of drugs which would be satisfactory in a patient with drug-sensitive organisms. Resistance has frequently been induced by the use of a drug regime now known to be unsatisfactory, more frequently one of the regimes using streptomycin two or three times weekly, with daily PAS or isoniazid. Resistance may be suspected from the history of previous treatment, from failure to respond to treatment, or from bacteriological culture sensitivity studies.

The advantages and disadvantages of the various combinations of antituberculous drugs have been the subject of much study in large cooperative trials. To avoid the development of drug-resistant organisms, a combination of at least two drugs to which the patient's organisms are sensitive must be given in adequate dosage. "Adequate dosage" for streptomycin means one gm. intramuscularly daily, and for PAS means a minimum of nine gms. daily by mouth. The minimum adequate dosage of isoniazid is less well established and appears to vary from person to person and to depend on which companion drug is used. The blood level of biologically active isoniazid obtained after a loading dose, and the rate of inactivation of isoniazid in the body, vary widely from patient to patient, but are constant for one patient unless altered by the concurrent administration of other drugs, especially PAS. Doses of isoniazid recommended vary from 200 mgm. per day to 12 or even 18 mgm. per kilogram per day, the higher dosages being used with safety only when the blood level of isoniazid attained by the patient has been measured and when pyridoxine is given to reduce the chance of toxic effects of isoniazid developing. Probably the most commonly used routine dose of isoniazid is 300 mg. daily.

Satisfactory drug regimes for a patient with organisms sensitive to isoniazid, PAS, and streptomycin are isoniazid and PAS, daily streptomycin and isoniazid, daily streptomycin and PAS, and the combina-

tion of all three drugs. If a patient's organisms are resistant to one of the three major drugs, good results will be obtained from treatment with the other two. The combination of three drugs has not been shown to have any great advantage over a two-drug combination in a patient with fully sensitive organisms, but it is probably good practice to use all three drugs in combination until sensitivity results on the patient's organisms are available. These studies take a minimum of three weeks from the time of submission of specimens to the laboratory. It is probably also wise to start treatment with all three drugs in the seriously ill patient with a heavily positive sputum, and to continue all three until the number of organisms present has been greatly reduced.

When a patient's organisms are resistant to two or to all three of the major drugs, his prognosis is much poorer and his treatment much more difficult. One or more of the less effective and more toxic "second-string" drugs must be used. This group of drugs includes pyrazinamide, viomycin, and cycloserine, all of which can have serious toxic effects and which should be given only under careful clinical and laboratory supervision.

Streptomycin, PAS, and isoniazid can all produce toxic effects, and those produced by streptomycin are the most serious. Any one of the three can produce an idiosyncratic reaction varying from fever or a mild skin rash to severe hepatic damage, exfoliative dermatitis, or a condition resembling anaphylactic shock. Serious idiosyncratic reactions are rare; usually the milder reactions can be overcome by desensitization. The most serious toxic effects of streptomycin is the development of dizziness; this occurs more commonly in older patients, usually after a few months of treatment. Dihydrostreptomycin causes dizziness less frequently than streptomycin, but causes deafness more frequently. The appearance of either of these symptoms calls for withdrawal of the drug, or the effect may become permanent.

The commonest side effects of PAS are those of gastrointestinal irritation; these are rarely severe enough to require cessation of the drug and will often settle down if treatment is continued. Occasionally a patient will be found to tolerate calcium or potassium PAS or a buffered preparation better than the regular sodium salt, but the enteric-coated preparations frequently appear to pass through the entire alimentary tract intact. Patients may endanger the success of their treatment by omitting PAS or reducing the dose at intervals to avoid GI symptoms. Urine assays for PAS performed on outpatients have shown that up to 30 per cent of those claiming to take PAS regularly do not do so. The importance of such default in allowing resistant organisms to the companion drug to develop must be recognized by both physician and patient.

The most common toxic effect of isoniazid is peripheral neuritis. This is comparatively rare unless high dosage is used without pyridoxine being given simultaneously.

The duration of drug treatment has increased steadily since the introduction of antituberculous drugs. Few tuberculosis physicians would now consider stopping drugs less than a year after the achievement of x-ray stability and a negative sputum, even in a case which was minimal in extent on diagnosis. Treatment is continued longer in cases where the original disease was more extensive, was slower to respond to drugs, or had been present for a longer period of time. Treatment for three or four years is by no means unusual, and in the elderly man with far-advanced, fibrotic, cavitary disease, treatment may need to be continued for the rest of his life. It may be that the latter part of a prolonged course of drug treatment can consist of isoniazid alone, once the disease is well under control and the number of tubercle bacilli left in the patient's body reduced considerably, but this question is still unsettled.

Rest was formerly the most important ingredient in the treatment of tuberculosis, but it has now lost this importance. The patient who is toxic, fevered, weak, breathless, or bleeding will still require more or less restriction of his activities. However the patient whose disease is responding to drug treatment can usually be up and about without prejudicing his recovery.

The dangers of bedrest in the older patient must particularly be kept in mind now that tuberculosis is found most frequently in the elderly. The younger patient whose disease has responded well to drugs, who has achieved x-ray stability and consistently negative bacteriology, and has been discharged from the hospital to continue drugs at home, need probably no longer be restricted to light work for a period of years, provided that he has not lost too much lung tissue. Physical exertion at this stage is less likely to cause relapse than premature cessation of drug treatment. The patient with drug-resistant organisms is in a different category, and bedrest may be the only form of treatment available to him.

The place of surgery in the treatment of pulmonary tuberculosis has also been changing steadily since the development of effective antituberculous chemotherapy. Surgery now finds its main application in the resection of portions of lung which have been damaged by tuberculosis beyond hope of repair and which are considered to present a continuing hazard to the patient. The drugs which have made lung resection safer by reducing the incidence of postoperative complications, such as spread of disease and bronchopleural fistula, have also made surgery less frequently

necessary. Long-term chemotherapy will frequently close cavities which once would have been resected, and the decision to resect a cavitated area of lung is now rarely made before drugs have had their chance for at least six months. The chance of postsurgical complications arising is also increased if surgery is undertaken before six months of adequate drug treatment has been given. When a cavity persists and tubercle bacilli can still be isolated from sputum or gastric washings after six months of adequate drug treatment, surgical resection should always be considered if the patient's general conditions allows and sufficient healthy lung can be left to maintain the patient. Usually the decision will be deferred for a longer period of time where there is hope of further response to drugs. In reaching decisions about whether and when to operate, the patient's total situation must be considered on an individual basis, and he must be allowed to express his own views on the subject.

The patient whose cavity fails to close but whose sputum converts to negative and remains negative is in a more debatable situation, and there is quite a wide variation of opinion on the need for resecting such residual cavities. The age and general condition of the patient, the size and situation of the cavity or cavities, the thickness of the cavity wall, the length of time the cavity has been present and the duration of chemotherapy before sputum conversion occurred, the chance that the patient may not continue to take his drug for a sufficient period of time, the patient's attitude towards surgery, the presence or absence of concurrent disease, and the demands likely to be made on the patient when he returns to the community must all be considered.

Resection of residual lesions left after cavity closure and of localized areas of non-cavitated disease was formerly practiced regularly, but increasing experience and confidence in drug treatment has reduced enthusiasm for surgery in such situations. A localized lesion must sometimes be resected early when the possibility that it is malignant rather than tuberculous cannot be ruled out.

Surgical procedures other than resection of lung tissue which are used in the treatment of respiratory tuberculosis include decortication of lungs or lobes by removal of thickened pleura, resection of emphysema sacs, and thoracoplasty. Removal of diseased or thickened pleura may allow underlying lung to function better in some cases, where it has not been too badly damaged by disease or held captive for too long. Thoracoplasty is now used mainly in order to tailor the thorax after lung resection. Thoracoplasty may be combined with resection at one operation, may precede, or may follow resection. As a definitive form of treatment, thoracoplasty has largely been replaced by resection or drug treatment but may still be used rarely in special circumstances where resection is unduly hazardous.

Collapse, once one of the most important methods of treatment of tuberculosis, has now been virtually abandoned in most centers. Artificial pneumothorax is now very rarely induced in this country as a therapeutic measure. Thoracoplasty and pneumoperitoneum are used to prevent residual air spaces, overdistension of remaining lung, or mediastinal shift after resection, rather than as collapse therapy. Occasionally obsolete methods of treatment may have to be considered when totally drug-resistant organisms are met.

Management of a case of pulmonary tuberculosis may be influenced by the simultaneous presence of various other conditions. Concurrent non-respiratory tuberculosis may require appropriate treatment such as nephrectomy or orthopedic surgery, and will usually benefit from the chemotherapy given for the pulmonary disease. Non tuberculous chest conditions such as chronic bronchitis and emphysema, may further reduce respiratory function and rule out the possibility of performing resectional surgery in a case otherwise suitable. Silicosis appears to alter the prevalence and course of pulmonary tuberculosis, increasing the prevalence and being associated with a more indolent type of disease, more difficult to recognize radiologically and bacteriologically, and slower to respond to treatment. Pregnancy does not interfere with the response of tuberculosis to drugs, and streptomycin, PAS, or INH do not interfere with pregnancy. Interruption of pregnancy because of tuberculosis is rarely, if ever, justified now. Old age and the various disabilities which attend it have their effects on the management of tuberculosis. The perils of bedrest in the elderly patient must be kept in mind, as must the confusion which may arise when an elderly person is removed from his familiar surroundings.

Aid for Morning Sickness

Ninety per cent of 80 women suffering from morning sickness in pregnancy got relief with prochlorperazine (tradename Compazine), writes Dr. Charles Leavitt Sullivan of Boston in the *New England Journal of Medicine*. The drug combines a tranquillizer and anti-emetic. Dr. Sullivan prescribed it for women whose nausea wasn't remedied first by reassurance, continued rest, adequate bowel control, and frequent eating.

It makes little difference how magnificent are our new buildings or how impressive are our private kingdoms. If no answer is found to war, all men will die poor.—*Norman Cousins*

Maternal Mortality

The patient, a thirty-five-year-old para eight, gravida nine, presented herself for medical care for the first time in the final pregnancy at term. Her physician did a thorough work-up at that time and immediately hospitalized the patient because of severe nonconvulsive toxemia. Subjectively the patient had blurred vision, dyspnea on exertion, nocturnal dyspnea, dysuria, and frequency of urination. She gave a vague and incomplete history of her previous pregnancies, but had only four living children. Objective findings included blood pressure of 240/160, three-plus edema of the ankles, grade four hypertensive retinopathy, expiratory wheezes in the lung bases. Laboratory data included normal blood count, serum sodium of 139, CO_2 combining power 17.3, chlorides, 94, and B.U.N. 18. Glucose tolerance test showed a diabetic curve. It was four-plus albumin urea. Serology was negative. No Rh typing or blood grouping was performed.

The fetal heart was audible at 120 per minute on the day of admission, but was not heard thereafter. Labor ensued spontaneously two days after admission and continued at a desultory rate for some 80 hours, being terminated by a rapid progress in the last hour before delivery. Delivery of a seven pound two-and-one-half ounce macerated fetus was accomplished without analgesia or complication.

Following obstetrical consultation, a bilateral tubal ligation was performed on the patient under general anesthesia 24 hours post partum. Cardiac arrest developed during surgery, and thoracotomy with cardiac massage was performed. The patient remained in a coma, and on the sixth postoperative day, a tracheotomy was performed and a feeding tube was inserted. Death occurred on the tenth postoperative day and was attributed to aspiration pneumonia. There was no autopsy.

Committee Opinion

In this case, the handling of the obstetric emergency, and its conclusion to successful delivery by the attending physician are commendable. The committee agreed, also, with the desirability of a sterilization procedure as protection for the patient's future health. It was felt that the more serious, though indirect, cause of the patient's death was her failure to obtain prenatal care. Proper management of her pregnancy might very well have completely altered the outcome. The direct cause of death, that is, the cardiac arrest and subsequent events, must be attributed to the poor choice of time of sterilization and the poor choice of anesthetic. It would have been preferable to wait until later when the patient had improved from her seriously ill condition before attempting the procedure. Furthermore local anesthesia would have provided a much safer anesthetic procedure.

This case serves once more to emphasize the essential value of good prenatal care. This implies, of course, a responsibility on the part of the patient to seek it. Secondly, it emphasizes that a seemingly innocuous surgical procedure such as tubal ligation is still fraught with danger, however remote and infrequent. As an elective procedure, it is warranted only under optimum conditions.

Classification

Maternal death, indirect, obstetrical, preventable.

One of a series of case reports prepared by the Committee on Maternal Welfare to illustrate the type of study made in each instance of maternal death in Kansas.

Heart Disease

The Rheumatic Heart in Pregnancy

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As enlightened medical care and public education have diminished the hazards of childbearing, more attention has been directed toward chronic diseases in the pregnant patient. One of these is rheumatic heart disease. It is the purpose of this paper to present basic concepts of heart physiology in pregnancy, both in the normal individual and in the one with rheumatic heart disease, and then to present current views regarding the management of the rheumatic heart disease patient during pregnancy and delivery.

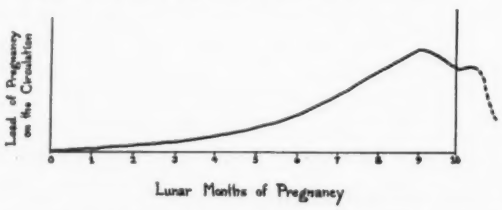
Incidence

Heart disease, as a cause of maternal mortality, is outranked only by hemorrhage, toxemia, and infection.[14] Gorenberg[13] reports that in a number of American obstetrical hospitals it is the most frequent cause of death. Various observers place the incidence of organic heart disease among pregnant women at about one to two per cent, with a mortality rate among these of two to five per cent. Rheumatic heart disease accounts for at least 90 per cent of the organic heart disease in pregnancy.[14] Bruce reports that of the remainder, six per cent is congenital, two per cent hypertensive, and two per cent miscellaneous. He also states that mitral stenosis accounts for 70 per cent of the valvular lesions in rheumatic heart disease.

Normal Physiological Changes in Pregnancy

Before one makes the diagnosis of heart disease in pregnancy, it is imperative that he knows and understands the normal cardiovascular alterations in pregnancy. Numerous observers have reported these alterations.

The physiological burden placed on the heart is well documented by Hamilton and Thomson. Cohen and Thomson first reported in 1936 that in normal pregnancy the cardiac output rises during the period between the 12th and the 36th week, then falls back toward normal. They report this increase in cardiac output as 50 to 65 per cent over the normal.



The greatest rise in cardiac output usually occurs between the 25th and the 32nd week, with a gradual fall in the last month and a return to normal in the early postpartum period. Total blood volume is also increased. This can be correlated with increased retention of sodium and water, probably because of altered endocrine function.[8]

This is one of a group of theses written by fourth year students at the University of Kansas School of Medicine, selected for publication by the Editorial Board from a group judged to be the best by the faculty at the school. Dr. Steinbach has completed his internship and is an Air Force Medical Officer at Blytheville Air Force Base, Blytheville, Arkansas.

Burwell[2] in 1938 found that the increase in cardiac output during pregnancy is greater than can be accounted for by the increased oxygen consumption. He postulated that the placenta acts like an arterio-venous fistula with a decreased arterio-venous oxygen saturation difference.

Thomson and Cohen[6] found vital capacity did not decrease, as was once thought to occur, but actually increased from 12 to 25 per cent during pregnancy. This is effected through increased chest circumference and increased A-P and transverse diameters.

In the light of these normal physiological changes, it is conceivable that signs and symptoms resembling cardiac disease could occur in the normal person. Let us now consider some of these signs and symptoms.

DYSPNEA: It was once thought that the dyspnea of pregnancy was due to the mechanical effect of the enlarging uterus. However, it is now known that dyspnea depends largely upon the ratio of the vital capacity to the pulmonary ventilation. Oram quotes Anthony and Hansen as reporting a 57 per cent increase in pulmonary ventilation during pregnancy. This large amount is in contrast to a much smaller increase in vital capacity, and therefore dyspnea may result.

Many normal pregnant women may experience dyspnea on exertion, especially around the sixth month, and may even have mild orthopnea. Since these could be symptoms of impending left heart failure or pulmonary edema, it is important to differentiate the pathological from the physiological.

The usual dyspnea of pregnancy does not interfere with housework. Very appreciable dyspnea before the sixth month should arouse suspicion of a cardiac lesion, as should increased dyspnea in a multipara over that of former pregnancies, especially if pulmonary causes can be ruled out.

The mechanism of the production of dyspnea in mitral stenosis is adequately discussed in most textbooks and need not be considered here. Soloff says that in some patients with mitral stenosis, dyspnea may be due solely to the mitral obstruction, in others solely to myocardial dysfunction; usually it is a combination of both.

EDEMA: Swelling of the ankles is quite common in the latter months of normal pregnancy. One mechanism may be obstruction of venous return from the legs by the enlarged uterus.[2] Hot weather, varicosities, and anemia may also contribute to this condition.[24] The major significance of edema during pregnancy is its appearance in conjunction with other cardiac signs and symptoms.

NECK VEIN DISTENSION: Although this may be seen in patients in cardiac failure, it is also quite common in normal pregnant patients.

TACHYCARDIA: In light of the increased cardiac output during pregnancy, tachycardia of 90-100 is not unusual.

Diagnosis of Rheumatic Heart Disease in Pregnancy

Having considered signs and symptoms which may mimic heart disease, let us analyze those definitely indicative of heart disease.

In the first place, a definite history of rheumatic fever should immediately alert the physician. Consideration of the criteria for diagnosis as outlined by Jones[19] is helpful. Among the major criteria are a history of carditis, migratory polyarthritis, chorea, subcutaneous nodules, and erythema marginatum. Minor criteria include fever, prolonged P-R interval in the EKG, elevated sedimentation rate, and evidence of preceding beta-hemolytic streptococcal infection. A history of the presence of two major, or one major and two minor, criteria indicate a high probability that the patient had rheumatic fever.

As previously mentioned, appreciable dyspnea before the sixth month accompanied by orthopnea should serve to stimulate a search for a cardiac lesion. In the absence of other pulmonary lesions, basal crepitations which persist after coughing or deep respiration should be regarded as signs of pulmonary congestion, and the patient should be fluoroscoped for detection of possible hilar congestion or pulmonary edema.

Hemoptysis is often found in patients with mitral stenosis.[24] Other important signs and symptoms include tachycardia greater than 100 persisting despite rest, auricular fibrillation, cyanosis, and hepatic engorgement with tenderness.

Cardiac auscultation is of course, very important in establishing the diagnosis of rheumatic heart disease. Even here normal cardiac changes may induce a false diagnosis of heart disease. Many pregnant women develop heart murmurs.[8,16,24] Gammelstoft described a systolic murmur best heard over the second and third left intercostal spaces, changing with position, which has been regarded as so characteristic of pregnancy that it has been called the "gestatory" murmur. Oram quotes Landt and Benjamin as postulating that this murmur is caused by kinking of the pulmonary artery.

Comparison of Physical Signs

To aid diagnosis of mitral lesions and to help prevent the false diagnosis of heart disease, Oram has presented a comparison of the physical signs of the normal heart in pregnancy with those of mitral valve disease.

Utmost care must be used in arriving at the diagnosis of rheumatic heart disease. This should entail the use of cardiac consultants by the obstetrician, with close cooperation thereafter if the diagnosis of heart

SIMILARITIES

	Normal Heart in Pregnancy	*Mitral Valve Disease*
Apex beat	Sudden; displaced to left	Sudden; displaced to left
First sound	Loud	Loud in M.S.
Third sound	Commonly present	Commonly present in M.I.
P2	Loud; often split	Loud; often split
Apical murmur	Pansystolic	Pansystolic
Extrasystoles	Frequent	Frequent
Neck vein distension	Commonly present	Commonly present
Ankle edema	Common	Present in failure

DIFFERENCES

	Normal Heart in Pregnancy	*Mitral Valve Disease*
Apex beat	Never left ventricular	Left ventricular in M.I.
Presystolic murmur	Absent	Mitral stenosis only
Apical syst. murmur	Thrill absent	Thrill may be present
Mid-diastolic murmur	Absent	Loud and long in M.S.
Opening snap mitral valve	Absent	Often present in M.S.
Basal crepitations	Never persistent	Persistent if in failure
Auricular fibrillation	Absent	May be present

disease is established. Once the diagnosis is made, a course of management must be outlined.

Prenatal Management

The American Heart Association's classification of cardiac patients provides a useful starting point.[22]

CLASS I: Patients with no limitation of normal physical activity.

CLASS II: Patients with slight limitation of physical activity.

CLASS III: Patients with marked limitation of activity.

CLASS IV: Patients with symptoms while at rest.

The incidence of cardiac failure in pregnancy according to classes has been reported as follows:[12] CLASS I—three per cent; CLASS II—eight per cent; CLASS III—73 per cent; CLASS IV—100 per cent. The mortality rate rises from less than one per cent in CLASS I to about two to five per cent in CLASS II and over ten per cent in CLASSES III and IV.[7]

Hamilton and Thomson also proposed classification of patients into favorable and unfavorable groups. Unfavorable signs and symptoms include signs or history of failure, dangerous arrhythmias such as auricular fibrillation, and complicating serious disease. In 750 pregnant cardiacs they found a 3.5 per cent mortality in the favorable group and a 16.7 per cent mortality in the unfavorable group. Rosenbaum reports that the presence of auricular fibrillation increases the death rate four times.

Approved prenatal care of the non-cardiac patient includes monthly visits during the first six months, bimonthly visits during months seven and eight, and weekly visits during the last month. Most investigators agree that frequent and regular prenatal visits are most important. Dack reports that serious complications are most often seen in those women coming to prenatal clinics late in pregnancy and in those without adequate followup. Unless the severity of the cardiac lesion warrants more frequent visits, the above schedule may be safely observed. During the prenatal visits special attention should be directed toward early detection of increasing dyspnea, orthopnea, edema, hemoptysis, and infection. Auscultation of the chest should be carefully done at each visit to detect early pulmonary congestion.

Frequent determination of vital capacity is advised by some authors.[13, 25] In the pregnant cardiac patient a decrease of 15 per cent or more in vital capacity or a continued decrease from month to month is a sign of impending failure.[6]

General measures[8] advocated include the following:

1. Ten hours of sleep at night and two hours of rest during the day. Oram advocates bed rest in the hospital for two weeks before the predicted delivery date.
2. Avoidance of strenuous activity.
3. Avoidance of emotional stress.
4. Adequate diet.
5. Sodium restriction.
6. Treatment of anemia.
7. Good dental care.
8. Prompt and thorough treatment of infections.
9. Hospitalization at the first sign of pulmonary edema or cardiac failure with the use of digitalis, diuretics, and other general measures.

Dack and Guttmacher both advocate the use of prophylactic antibiotics during pregnancy. Dack advocates the use of 1.2 million units of Bicillin® monthly.

Gorenberg[13] presents the following rules regarding prenatal management of the cardiac patient:

I. Extra bedrest.

II. The pregnant cardiac over age twenty-five should be observed at weekly intervals.

III. All pregnant patients in CLASS III or IV are hospitalized at the time of the first clinic visit and are kept at absolute bedrest for the remainder of the pregnancy.

IV. All patients with a history of previous failure are kept at bedrest for the entire pregnancy.

V. Hospitalize at the first sign of cardiac failure.

Age, obstetrical history, economic status, social surroundings, and personal temperament, as well as the severity of the disease, must receive careful consideration in determining prenatal management.

Cardiac Complications During Pregnancy

A. Pulmonary Edema: Morgan Jones found that acute pulmonary edema was the most important cause of death in pregnant cardiacs. Dack agrees and states that death from intractable pulmonary edema is most likely to occur between the 25th and the 32nd week of gestation. It is extremely important to see patients regularly in order to detect signs and symptoms of impending pulmonary edema such as increasing dyspnea, orthopnea, basilar rales, cough, and pink sputum. Acute pulmonary edema should be treated vigorously with positioning, maintenance of a clear airway, oxygen by mask or catheter, morphine, rotating tourniquets or venesection, intravenous aminophylline, rapid digitalization, and fluid and sodium restriction.

B. Cardiac Failure: Cardiac failure is probably a factor in about 75 per cent of deaths of patients with heart disease.[24] Oppel, in investigating 620 cases of organic heart disease, found the incidence of congestive failure as four per cent with a mortality among these of 15 per cent. He found that the development of failure depended not only upon the severity of the cardiac damage but also upon extracardiac factors. These include upper respiratory tract infection, amount of exertion, cough, anemia, obesity, arrhythmia, and emotional upsets. Of these, upper respiratory infection is a frequent precipitating factor.

He further observed the development of failure during each of the last eight months of gestation, as well as during the first 24 hours after delivery. He states that the most frequent and important sign of failure during pregnancy is congestion of the lungs. Failure occurs more frequently in the older patients. Oppel found that failure almost always responded to proper medical management and treatment with bedrest, digitalis, diuretics, and sodium restriction. Any associated infection should be vigorously treated with antibiotics.[8]

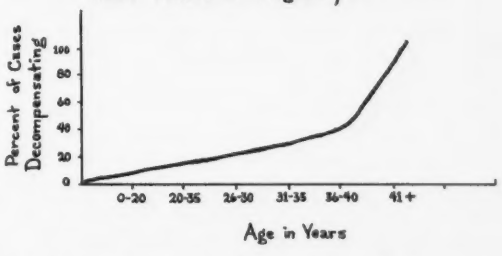
Gorenberg[13] believes that all pregnant cardiac patients with a history of previous decompensation should be hospitalized when first seen and kept at absolute bedrest for the remainder of the pregnancy. This view may seem a bit extreme, but certainly most investigators agree that patients should be placed on bedrest at the first sign of failure.

Interruption of Pregnancy

Here again classification, as proposed by the New York Heart Association, is valuable. With rare exceptions, patients in CLASS I and II may be allowed to go through pregnancy. The situation in CLASS III and IV patients merits more consideration. Despite the fact that pregnancy in these patients is a definite threat to life, many women will risk much for a baby. Eastman states that about one-third of CLASS III pregnant patients will go into failure before delivery. This raises the question of therapeutic abortion. Such a question is loaded with medical, moral, social, and emotional implications which must be seriously weighed.

No definite factor or factors can be cited as absolute indications for therapeutic abortion, although two are regarded as being most indicative. These are a history of previous failure, and the age of the patient. There is general agreement that previous failure predisposes toward further failure. Eastman states that with a history of previous decompensation, the likelihood of failure in the present pregnancy is about 65 per cent. Age is also an important factor. It has been shown by some[8] that the pregnant patient with rheumatic heart disease over age 35 is more likely to go into failure. (See accompanying graph.)

The Effect of Increasing Age on the Frequency of Heart Failure in Pregnancy [8]



In theory therapeutic abortion is sometimes recommended in the previously mentioned situations; however, in actual practice there seems to be general agreement that with proper medical care most pregnancies may be continued. As Drury states, "Good antenatal care serves the mother better than either therapeutic abortion or sterilization."

If one should still decide to terminate the pregnancy, it should preferably be done before the 20th week.[25] After this time it carries as great a risk as delivery itself.[14]

Management of Labor

In general cesarean section is contraindicated except for obstetrical indications.[13, 24] Gorenberg[13] reports that in 345 pregnant cardiac patients the mortality rate with vaginal delivery was two per cent, while with section it was 14 per cent. Other investigators[16, 24] report section mortality as twice that for vaginal delivery. Oram states that probably the most important indication for section is progressive deterioration of the cardiac condition despite good treatment.

One to two weeks of bedrest in the hospital before the expected date of delivery is always a beneficial preparation for labor. In less favorable cases it is mandatory. The question of prophylactic digitalization arises. Eastman advocates withholding digitalis during pregnancy and labor until signs of cardiac embarrassment actually develop.

At the beginning of labor the patient should be placed in the semirecumbent position. Pulse and respiration should be checked frequently. If they rise above 115 and 28 respectively, cardiac failure should be suspected, and morphine and digitalis administered.[10]

In the second stage of labor, patients should be checked more frequently for evidence of failure or pulmonary edema. Strong voluntary effort should be avoided.[24] Ether, caudal, or local anesthesia may be used most effectively and safely. Routine episiotomy and the use of low forceps are advocated by some.[10, 24]

Cardiac failure is a hazard in the immediate postpartum period because of the return to the general circulation of blood previously filling the placenta and uterine sinuses.[24] Rosenbaum advocates application of venous tourniquets to all extremities after delivery of the placenta in an attempt to prevent flooding of the general circulation. Fluid consumption for at least the first 24 hours after delivery should probably be curtailed. Prophylactic penicillin for five to seven days postpartum is recommended to prevent subacute bacterial endocarditis. Guttmacher believes postpartum anticoagulant therapy in patients with auricular fibrillation minimizes embolic dangers. Bedrest for two to three weeks postpartum is also indicated.

Mitral Valvulotomy

In a brief consideration of this relatively new procedure, we find opinion as to its worth divided between the enthusiasts on one hand and the complete skeptics on the other. The majority of throught seems to lie between these two extremes.

If indicated, should this procedure be done before, during, or after pregnancy? Burwell[3] believes that in pregnancy the extent of the mitral lesion is difficult to determine, and feels that valvulotomy should never be done as an elective procedure during pregnancy. He feels that termination of pregnancy is a safer procedure. Marshall and Pantridge, however, feel that in suitably selected cases valvulotomy is preferable to termination. Cranshaw feels that if the decision lies between termination and valvulotomy, the latter should be done because of relatively small risk (less than four per cent mortality) and psychological and religious facets. He states that valvulotomy may be done as an elective procedure during pregnancy.

Other investigators feel that as yet valvulotomy is primarily an emergency measure to be used on patients with repeated attacks of pulmonary edema or those in whom failure is progressing despite intensive medical therapy. Good valvulotomy results have been reported by these authors, but there is definite mortality (one to five per cent) and morbidity even in the most highly selected cases, and the permanency of the benefit is yet to be determined. Soloff feels that in selecting patients for valvulotomy, it is also important to first determine whether the problem is primarily obstructive or myocardial.

As cardiac surgery is made safer and techniques are perfected, undoubtedly valvulotomy will prove increasingly profitable in the management of pregnant cardiac patients.

Prognosis

As previously stated, the mortality rate ranges from less than one per cent in CLASS I to over ten per cent in CLASS III and IV.[7] In general, prognosis depends on the age of the patient, the severity of the valvular lesion, and management.[8, 9] Gorenberg[12] feels that with proper care, nearly every pregnancy in the patient with rheumatic heart disease can be brought to a successful termination and that childbearing does not accelerate the rheumatic process or adversely affect longevity.

Summary

1. Rheumatic heart disease is one of the major sources of maternal mortality.

2. Normal physiological changes in pregnancy must be differentiated from those found in rheumatic heart disease.

3. Pulmonary edema and congestive failure are the most frequent prenatal cardiac complications.

4. Careful prenatal care is of utmost importance in the early detection and treatment of these complications.

5. Therapeutic abortion is rarely indicated.

6. Vaginal delivery is the procedure of choice.

7. Mitral valvulotomy is a valuable adjunct in certain cases not responding to medical treatment.

With proper diagnosis and management then, the fulfillment of motherhood can be more safely allowed to the woman with rheumatic heart disease, and needless deaths can be prevented.

Blytheville Air Force Base
Blytheville, Arkansas

References

1. Bruce, R. A.: "Heart Disease in Pregnancy," *Northwest M.* 54:861, August, 1955.
2. Burwell, C. Sidney, et al.: "Circulation During Pregnancy," *Arch. Int. Med.* 62:979, December, 1938.
3. Burwell, C., and Metcalfe, James: "Heart Disease and Pregnancy," *Mod. Con. Cardiovas. Dis.* 23:250, December, 1954.
4. Close, W. D.: "Experience with Mitral Commissurotomy," *J. Indiana M. Assn.* 47:600, June, 1954.
5. Cohen, M. E., and Thomson, K.: "Report of New England Heart Association," *N. Eng. J. Med.* 214: April, 1936.
6. Cohen, M. E., and Thomson, K.: "Studies on the Circulation in Pregnancy," *J.A.M.A.* 112:1556, April, 1939.
7. Cranshaw, G. R., et al.: "Mitral Valvotomy in Pregnancy," *S. Afr. M. J.* 28:496, June, 1954.
8. Dack, S.: "Rheumatic Heart Disease," *J. Mount Sinai Hosp., N. York* 24:494, July-August, 1957.
9. Drury, M. I., et al.: "Rheumatic Heart Disease Complicating Pregnancy," *Brit. M. J.* 4853:70, January, 1954.
10. Eastman, Nicholson J.: *Williams Obstetrics,* Appleton-Century-Crofts, Inc., New York, 1950.
11. Gammelstoft, S. A.: "The Heart in Pregnancy," *Surg., Gyn., Obst.* 46:382, March, 1928.
12. Gorenberg, H., and Chesley, L. C.: "Rheumatic Heart Disease in Pregnancy; the Remote Prognosis in Patients with Functionally Severe Disease," *Am. J. Obst.* 68:1151, October, 1954.
13. Gorenberg, H.: "Rheumatic Heart Disease in Pregnancy," *J. M. Soc. N. Jersey* 53:58, February, 1956.
14. Guttmacher, Alan F.: "Heart Disease in Pregnancy, an Obstetrical Viewpoint," *Am. Practitioner* 6:1475, October, 1955.
15. Hall, J. E., and Knapp, R. C.: "Mitral Commissurotomy in Pregnancy," *Am. J. Obst.* 72:970, November, 1956.
16. Hamilton, B. E., and Thomson, K. J.: *The Heart in Pregnancy and the Childbearing Age,* Little, Brown, and Co., Boston, 1941.
17. Igna, E. J., et al.: "Pregnancy and Cardiac Operations," *Am. J. Obst.* 71:1024, May, 1956.
18. Jones, A. Morgan: *Heart Disease in Pregnancy,* Grune and Stratton, New York, 1951.
19. Jones, T. D.: "Jones Criteria (Modified) for Guidance in the Diagnosis of Rheumatic Fever," *Circulation* 13:617, April, 1956.
20. MacLeod, Malcolm: "Rheumatic Heart Disease in Pregnancy," *Lancet* 267:668, October, 1954.
21. Marshall, R. J., and Pantridge, J. F.: "Mitral Valvotomy During Pregnancy," *Brit. M. J.* 5027:1097, May, 1957.
22. New York Heart Association: *Functional Capacity and Therapeutic Classification,* New York Heart Association, New York, 1939.
23. Oppel, Theodore: "Congestive Heart Failure in Pregnancy," *Am. J. Obst.* 39:24, January, 1940.
24. Oram, Samuel: "Pregnancy and Rheumatic Heart Disease," *Postgrad. M. J., Lond.* 32:76, February, 1956.
25. Rosenbaum, Francis F.: "Heart Disease in Pregnancy," *Texas J. M.* 50:26, January, 1954.
26. Soloff, Louis A., et al.: "Factors in Rheumatic Heart Disease," *Am. J. M. Sc.* 233:518, May, 1957.

The Nation's Health

(Continued from page 392)

There is general agreement that a problem does exist. The rising cost of medical care, and particularly of hospital care, over the past decade has been felt by persons of all ages. Older persons have larger than average medical care needs. As a group they use about two and a half times as much general hospital care as the average for persons under age sixty-five, and they have special need for long-term institutional care. Their incomes are generally considerably lower than those of the rest of the population, and in many cases are either fixed or declining in amount. They have less opportunity than employed persons to spread the cost burden through health insurance. A larger portion of the aged than of other persons must turn to public assistance for payment of their medical bills or rely on "free" care from hospitals and physicians. Because both the number and proportion of older persons in the population are increasing, a satisfactory solution to the problem of paying for adequate medical care for the aged will become more, rather than less, important.

In our society the existence of a problem does not necessarily indicate that action by the Federal Government is desirable. The basic question is: Should the Federal Government at this time undertake a new program to help pay the costs of hospital or medical care for the aged, or should it wait and see how effectively private health insurance can be expanded to provide the needed protection for older persons?

The report itself does not attempt to answer this question, although it sets forth the arguments on both sides. Building on the data contained in the report, we are now trying to develop an answer. It is not an easy task, and I would not venture to predict where we will come out. Of one thing, however, you may be sure: before reaching any final conclusion we will seek opportunities for consultation with representatives of the medical profession and other interested groups. This approach has helped to solve many health problems in the past, and we are confident that it will lead us to a sound solution of this one also.

As the President has eloquently declared:

A healthy citizenry is the first defense line of the Republic. A healthy citizenry is capable, in peacetime, of expanding our economy; in times of critical tension, of carrying on without cracking or growing hysterical; in times of conflict, of showing the endurance and stamina upon which victories are built.

We are partners in a great cause. The Kansas Medical Society, in its first hundred years, has made a distinguished contribution to that partnership. It will, I am confident, continue to grow in strength in its next century of service.

Assistant Secretary
Department of Health, Education, and Welfare
Washington, D. C.

Progressive Refractory Heart Failure of Obscure Origin in a Young Man

Case Presentation

A twenty-eight-year-old, single, white man was admitted to KUMC on January 1 complaining of shortness of breath. He died on January 24. He had considered himself well until May 30 of the previous year when he first noticed that he tired easily. On July 4 he had an acute onset of pain "over the right kidney" which cleared on increased water intake and without medical attention. He had no other symptoms until July 20 when he became flushed, but his temperature was normal. On July 30 he began to have polydipsia. At that time a blood sugar test and a urinalysis were negative, but the white blood count was elevated. By August 15 he had progressive swelling, stiffness, and pain in his ankles and knees, and by September 3 the pain had spread to his right wrist. After treatment by his physician he showed some improvement.

On September 5 he was hospitalized for further diagnostic studies. On October 22 he had a severe epistaxis. One week later he noted weakness and redness of his left leg with tenderness and pain on walking. He was dismissed on November 23, but was readmitted five days later complaining of pain and pressure in the left anterior chest at the diaphragmatic level and extreme shortness of breath. Salicylate therapy was started, but on December 3 he had another severe nosebleed, and the drug was discontinued. From mid-December until his admission here, he had progressive symptoms of dyspnea, weakness, and swelling of the abdomen. He was admitted to this hospital for further diagnostic studies and therapy.

From 1949 to 1951 the patient had had frequent sore throats, for which he had had a tonsillectomy in 1951. In 1956 he had had two episodes of "flu" with prolonged recoveries. He had been in a reserve army unit and had undergone several physical examinations for summer camps, but there was no report of any abnormalities. His last physical examination was in August, 1954.

For six months before admission he had nocturia twice nightly. For about one month before admission he had noted mild, generalized pruritus. During 1957 he had lost 20 pounds.

The patient was a well developed, but poorly nourished, white man. He weighed 141 pounds. At the time of admission there was definite cyanosis of the lips, face, and nails. The blood pressure was 105/70; pulse, 100 and regular; respiratory rate, 20 per minute. He had severe dental caries. There was jugular vein distention. The pupils reacted to light and accommodation. There was a high left thoracic scoliosis, and bilateral basilar rales were heard. There was a definite systolic expansion of the left precordium. The PMI was in the fifth intercostal space at the anterior axillary line. There was a grade I to II apical systolic thrill, and a grade III harsh apical systolic murmur was transmitted to the axilla and along the left sternal border. The mitral first sound was increased in intensity, and a third heart sound was present. A grade II diastolic rumble was heard at the mitral region. The second pulmonic sound was accentuated. The liver was palpable 12 cm. below the right costal margin and was massively enlarged, tender, and firm. The spleen was palpable 3 cm. below the left costal margin. There was no pedal edema, and the pulses were normal throughout the extremities. There were no palpable lymph nodes. The neurological examination was not remarkable.

Seven urine specimens gave specific gravities from

Edited by Jesse D. Rising, M.D., and Mahlon Delp, M.D., from recordings of the conference participated in by the departments of medicine, pediatrics, surgery, radiology, and pathology of the University of Kansas Medical Center as well as by the third and fourth year classes of students.

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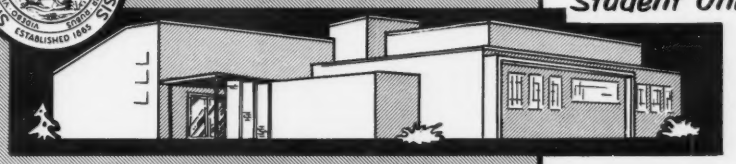

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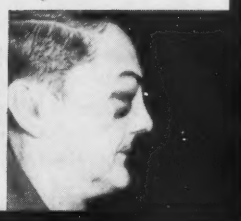

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LACERATION
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in 3 days...
returned
to school...
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in a week after
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1.007 to 1.030 with albumin consistently one-plus and negative sugar. There were many red blood cells and 10 to 20 wax and granular casts per low power field. The red blood count was 4,520,000 with 11.5 gm. hemoglobin; hematocrit, 39 ml.; mean corpuscular volume, 87; mean corpuscular hemoglobin, 25.2; reticulocytes, four per cent; and the platelet count was 253,000. The white count was 14,250 with a normal differential. An LE cell preparation was negative. The VDRL was non-reactive. A fasting blood sugar was 83 mg. per cent; serum albumin, 3.76 gm. per cent; serum globulin, 1.69 gm. per cent. The alkaline phosphatase was 2.3 millimol units, and the total serum bilirubin was 2.7 mg. per cent (direct 1.1 mg. per cent). The cholesterol was 147 mg. per cent with 52 per cent esters. The thymol turbidity was 7 units. The sedimentation rate was 2 mm. per hour. The C-reactive protein was four-plus; ASO titer, 50; mucoprotein, 306; Weltmann, six. There was six per cent uptake of I-131 in 24 hours. In seven tests the blood urea nitrogen level ranged from 19 to 33 mg. per cent; sodium, 134 to 113 mEq; potassium, 4.8 to 6.0 mEq; and chloride, 99.96 to 70 mEq. The serum osmolarity during the last three days of life was from 230 to 246 milliosmols per liter, and the urine osmolarity was from 756 to 735 milliosmols per liter. The venous pressure was 180 mm. of saline, and the arm-to-lung circulation time was 135 seconds.

The patient was acutely and chronically ill on admission, and he never showed any improvement. He was afebrile and maintained a stable blood pressure throughout his hospitalization. He had a persistent tachycardia. His daily fluid intake averaged 2,124 ml., and his daily output averaged 1,380 ml. He was digitalized and maintained on 0.15 mg. of digitoxin daily. He was started on a 1,650 mg. sodium diet, but this was decreased to 500 mg. on his 12th hospital day. Attempts at diureses were made with prednisone, potassium chloride, ammonium chloride, ethyl alcohol, meralluride, aminophyllin, chlorothiazide, and mannitol. His weight steadily increased, and on January 22 he weighed 150 pounds. At that time he was given 62.5 gm. of mannitol intravenously, and he received 60 gm. of mannitol the following day. His weight dropped to 139 pounds. He became dyspneic at rest and required intermittent oxygen. He was apprehensive and was variously treated with meprobamate, barbiturates, promazine, and diphenhydramine. He had frequent episodes of nausea and vomiting, and on two occasions he had a dark brown emesis. He complained of epigastric distress for which he was given antacids. On January 22 a gallop rhythm was noted. He became disoriented and intermittently stuporous. On the evening of January 24 his restlessness increased and his respiration became labored. His pulse rate was recorded at 20 per minute at 8:30 p.m., and he died quietly about 20 minutes later.

Dr. Mahlon Delp (moderator): Are there any questions?

Donald Sleeper (student)*: What therapy did he receive from his local physician?

Dr. Robert Hudson (internist): He was given salicylates.

Irving Umansky (student): Had he previously had a murmur?

Dr. Hudson: It was reported that he had a murmur at the age of 12, but the patient denied it.

Lowell Snyder (student): Did he have petechiae at any time?

Dr. Hudson: No.

Harley Sterling (student): What was his temperature course?

Dr. Hudson: He had one period of elevated temperature after his sixth hospital day.

Miss Donna Lea Steeples (student): Did he have any head injuries?

Dr. Hudson: No, he did not.

Mr. Snyder: What was his fluid intake?

Dr. Hudson: The fluid intake was between 1,500 ml. and 3,000 ml., orally, throughout his hospitalization.

Mrs. Carol Sleeper (student): Were his joint pains migratory?

Dr. Hudson: The ankle and knee pain began almost simultaneously and extended to his wrists, but there is no specific information that the pain began in one joint and then migrated to another.

Mrs. Sleeper: Did he have a skin rash or any subcutaneous nodules associated with this pain?

Dr. Hudson: No, he did not.

Raymond Stone (student): Was his urinary output normal?

Dr. Hudson: His urinary output averaged 1,380 ml. for about 18 hospital days and then dropped to 300 ml. for about four days. He then diuresed with mannitol.

Miss Steeples: What were the fluoroscopic findings?

Dr. Hudson: There were no specific findings other than an enlarged heart.

Mr. Umansky: Did the arthralgia persist throughout his illness?

Dr. Hudson: No.

Mr. Stone: Had he taken any drugs before May 30?

Dr. Hudson: No.

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* Although a student at the time of this conference in May, 1958, he, like the others referred to as students, received the M.D. degree in June, 1958.

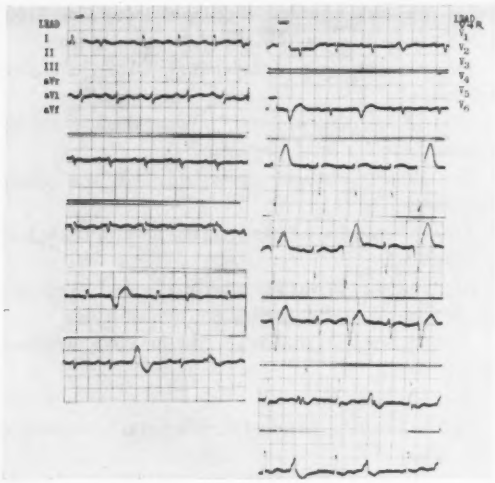


Figure 1. Electrocardiogram taken on January 16, 1958.

Mr. Sterling: Did he have any fever before his hospitalization?

Dr. Hudson: No, he did not.

Mr. Sleeper: What were the blood ammonia determinations?

Dr. Hudson: On his 16th hospital day the blood ammonia was 120; on the 20th day it was 109.

Mr. Umansky: Will you describe the sore on his leg?

Dr. Hudson: It was a deep sore.

Mrs. Sleeper: Did he get any relief of his digestive symptoms from antacids?

Dr. Hudson: He had only slight relief.

Dr. Delp: If there are no other questions, we will now have the electrocardiograms.

Mr. Sterling: The first electrocardiogram on January 2, 1958, shows a rate of approximately 100 with a regular sinus rhythm. P waves are present in all leads. The P-R interval is at the upper limits of normal. There is a normal progression of the R wave across the chest. There are occasional multifocal ventricular premature contractions.

Another tracing taken on January 16 (Figure 1), shows a similar sinus rhythm and a prolonged P-R interval. Numerous VPCs alternate with the normal beat of the heart. There is cupping of the ST segment in leads V_5 and V_6 which I interpret as a digitalis effect. There is notching of the P waves in lead I, as noted in the first tracing.

The last tracing, taken on January 24, shows a sinus rhythm and an increased rate of approximately 120 per minute. The length of the P-R interval is increased, and there is some cupping of the ST segment in lead V_5. There are no VPCs. I interpret this tracing as sinus tachycardia with an axis deviation of approximately 0 to −30 and digitalis effect.

Dr. Delp: Thank you. May we see the x-rays now, please?

Mr. Stone: The P-A film of the chest, taken on January 2 (Figure 2), shows no bony abnormalities. There is definite cardiac enlargement, and the vascular markings are increased. On the lateral film (Figure 3) there is slight deviation of the barium swallow, but no marked abnormality. I interpret these films as showing generalized enlargement of the heart.

Dr. Delp: May we have your comments, Dr. Tice?

Dr. Galen Tice (radiologist): A film taken in December showed the heart to be slightly more enlarged than is shown here, and I believed at that time that there was some decompensation. I was surprised that there was no displacement of the esophagus. This appeared to be a mitral heart from the P-A and lateral views, but it could not be verified from displacement of the esophagus.

Dr. Delp: Thank you. Mr. Umansky will now begin the discussion.

Differential Diagnosis

Mr. Umansky: A twenty-eight-year-old man was admitted to this hospital on January 1, 1958, complain-

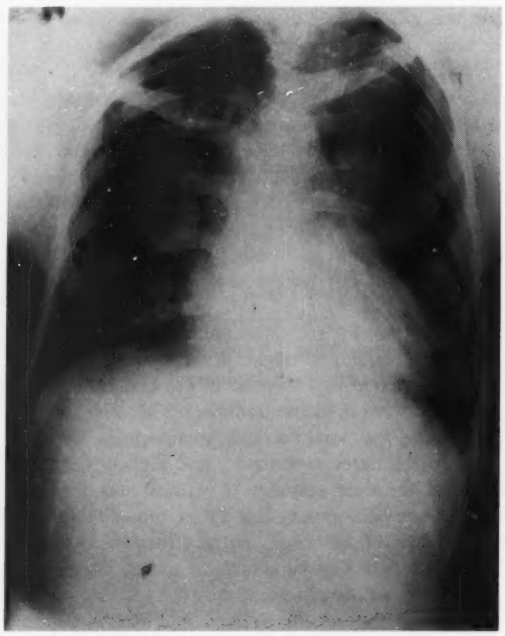


Figure 2. P-A film of chest on January 2, 1958.

ing of shortness of breath, weakness, and abdominal swelling. He died 24 days later. He had a history of frequent sore throats from 1949 to 1951, after which he apparently was well until May, 1957, when he had an acute onset of pain over the right kidney which subsided with increased water intake. On July 30 he had an elevated white count. From August 15 to September 3 he had migratory joint pains, swelling, and stiffness. He was hospitalized, and on October 30 he had redness, pain, and tenderness in his left leg. On December 3 he had developed chest pain and dyspnea associated with progressive weakness and abdominal swelling. Laboratory reports showed a mild albuminuria, microscopic hematuria, and casts. There was a mild anemia and an elevated mean corpuscular volume. A "rheumatogram" showed questionable rheumatic activity. The venous pressure, the circulation time, and the blood urea nitrogen were elevated, but the sodium and chloride values fell progressively during his hospitalization. He had cyanosis, mild tachycardia, jugular distention, basilar rales, cardiomegaly, and an apical systolic murmur. There was an apical diastolic murmur with a loud first mitral sound and an accentuated second pulmonic sound. There was hepatomegaly and splenomegaly. His condition persistently became worse; he became stuporous, and his respiration became labored. He died quietly on January 24.

Figure 3. Lateral film of chest.

My differential diagnosis will be based on progressive congestive failure in a twenty-eight-year-old man. Hyperthyroidism is among the several factors that can precipitate heart failure or render it refractory to treatment, but I can rule out this disease because of the low I-131 uptake study and the lack of characteristic signs of thyrotoxicosis. Anemia must be considered here, but the degree of anemia was too slight to believe that this was responsible for his heart failure. Beriberi is an unlikely diagnosis because he did not have a low thiamine diet or peripheral neuritis. I shall rule out A-V fistula because he had no bruit or continuous murmur, and there was no wide pulse pressure. Arrhythmias with tachycardia, such as paroxysmal atrial tachycardia, may contribute to left ventricular failure, but there was no evidence for this disease.

Hypertension can be dismissed as a possible diagnosis because of his stable low blood pressure. I can also rule out hepatic cirrhosis because there were no signs of nutritional deficiency or alcoholism, and the serum protein was relatively adequate.

Constrictive pericarditis may present a clinical picture similar to that of our patient's, but an enlarged heart and prominent cardiac pulsations such as he had are not found in that disease.

Primary amyloidosis usually involves only the heart, but in 25 per cent of these cases, the liver, kidneys, and spleen may also be involved, contributing to classical failure. In the absence of other findings, however, I shall rule it out.

Disseminated lupus erythematosus often presents many of the symptoms found here such as polyarthralgia, polydermatitis, urinary findings, cardiac involvement, and congestive failure. Our patient, however, did not have the usual albumin-globulin reversal or leukopenia, the LE preparation was negative, and there were no skin lesions.

Periarteritis nodosa could account for many of his signs and symptoms, but there was no hypertension, and diastolic murmurs are rare in that disease. Also, there is usually a reversal of the albumin-globulin ratio and an eosinophilia. Patients with periarteritis nodosa usually die of renal failure with a concomitant hypertension.

The Lutembacher's syndrome occurs in six per cent of the cases of atrial septal defect. The systolic murmur occurs most often at the lower sternal border at the second or third interspace, but can occur occasionally at the apex. This could account for the patient's physical findings and pulmonary arteriolar dyspnea. Congestive failure occurs with cyanosis. This does not explain his polyarthritis, which is usually

diagnosed at an early age. The x-rays do not show a prominent pulmonary outflow tract.

I believe the patient's underlying disease was rheumatic heart disease. He had systolic and diastolic murmurs, both of which were consistent with a mitral stenosis and insufficiency. The loud first mitral sound and increased second pulmonic sound, the shift of the PMI to the left, and the third heart sound were all consistent with rheumatic heart disease.

In general from five to ten years elapse from the first rheumatic attack to the development of the valvular lesion of mitral stenosis. The patient's sore throats which he had from 1949 to 1951 could have been his first attacks. There was no evidence at that time of polyarthralgia or the usual symptoms of rheumatic fever, but about 40 per cent of adults with rheumatic heart disease give no history of a previous attack. He may have had a murmur at the age of 12, and his first attack may date back even earlier. The peak incidence is at seven years of age, and cardiac involvement is most likely when the disease occurs at an early age.

Subacute bacterial endocarditis is one of the complicating factors in rheumatic fever with a damaged valve, and symptoms may be mistaken for the "flu." By May our patient had had two episodes of "flu," and there was the gradual onset of weakness, easy fatigability, hepato-splenomegaly, and the presence of embolic phenomenon. In July he had an onset of pain over the right kidney, and I believe that this was an embolus which gave rise to focal embolic glomerulonephritis and which could explain the finding of many red blood cells in the urine. The migratory arthritis may have been due to subacute bacterial endocarditis, but I believe that he was having another acute onset of rheumatic fever at that time with migratory polyarthritis and pericarditis. The elevated white cell count gives indirect evidence of infection.

Nosebleeds are a common symptom of rheumatic fever. The additional use of salicylates may have given rise to a thrombocytopenia, and there was the possibility of thrombophlebitis while he was hospitalized. He may have had two episodes of pulmonary embolization, but, because he also had a superimposed bacterial endocarditis, the first episode in the left diaphragmatic area may well have been a splenic infarct. This was followed by progressive signs of heart failure, weakness, and edema. His nocturia may have been the result of nocturnal mobilization of edema fluid. The urinary findings were consistent with congestive failure and focal glomerulonephritis. He failed to show any improvement despite treatment with digitalis, a low sodium diet, and diuretics. He developed shortness of breath, hepato-splenomegaly, rales, and tachycardia. Bacterial endocarditis also probably contributed to the congestive failure.

The patient had a low salt syndrome as evidenced by the nausea and vomiting, the diminishing serum sodium and chloride, and the oliguria with low urinary electrolyte. His congestive failure progressed, and he became disoriented and stuporous because of cerebral hypoxia. His labored respiration was evidence of respiratory edema and had not yet contributed to conduction surfaces and insufficient myocardial function which resulted in his death.

I believe that the patient had rheumatic heart disease complicated by bacterial endocarditis.

Clinical Discussion

Dr. Delp: Miss Steeples, what is your diagnosis?

Miss Steeples: Rheumatic heart disease with superimposed subacute bacterial endocarditis.

Dr. Delp: Do you believe he had a mitral stenosis?

Miss Steeples: I believe his predominant lesion was mitral regurgitation.

Dr. Delp: Mr. Sleeper?

Mr. Sleeper: I believe he had rheumatic heart disease with mitral stenosis and regurgitation.

Dr. Delp: Mr. Snyder?

Mr. Snyder: Rheumatic heart disease and mitral insufficiency.

Dr. Delp: Mr. Stone?

Mr. Stone: Rheumatic heart disease, carditis and subacute bacterial endocarditis, mitral stenosis and insufficiency.

Dr. Delp: Why do you use the term "carditis"?

Mr. Stone: Because it occurs in the rheumatic process.

Dr. Delp: Mr. Snyder, would you have expected the patient to show any response to the 60 mg. of steroids which he received daily?

Mr. Snyder: If he had an acute carditis, he should have responded to the treatment.

Dr. Delp: Do you believe the cardiogram is consistent with mitral stenosis?

Mr. Snyder: One would expect more right heart hypertrophy in mitral stenosis. This tracing shows left axis deviation.

Dr. Delp: Would you expect to find notched P waves in the electrocardiogram of this patient, Mr. Sleeper?

Mr. Sleeper: The P waves would be predominant in lead II.

Dr. Delp: Mr. Umansky, how do you explain the fact that three blood cultures were negative after ten days?

Mr. Umansky: It is not unusual for more cultures to be negative than positive in a subacute bacterial endocarditis.

Dr. Delp: The patient had a temperature of 100 degrees on his first hospital night, and on one other occasion his temperature was 99.6 degrees, but he was afebrile throughout the rest of his hospitalization. Is this characteristic of subacute bacterial endocarditis?

Mr. Umansky: The temperature is usually elevated, and the administration of prednisone could also have affected it.

Dr. Delp: How long was he treated with prednisone, Dr. Hudson?

Dr. Hudson: He was started on prednisone on his fifth hospital day and received it for 12 days.

Dr. Delp: Mr. Snyder, why was he treated with mannitol?

Mr. Snyder: Mannitol is sometimes used in the treatment of edema which is refractory to other diuretic agents. The mannitol acts as an osmotic diuretic.

Dr. Delp: Dr. Crockett, may we have your comments, please?

Dr. James E. Crockett (internist): The patient was in low output failure, and the clinical diagnosis was acute rheumatic carditis. We did not believe that he had a subacute bacterial endocarditis, and there was nothing to point to a diagnosis of mitral stenosis. He did have an opening snap, and there was a distinct third heart sound of rapid ventricular filling. There was a loud systolic murmur in the mitral area which was transmitted to the axilla. There was a mid-diastolic rumble which is not infrequently heard in patients with an acute rheumatic carditis, and there was mitral regurgitation with some deformity of the valve. A mid-diastolic sound is produced by the volume of blood passing across the valve in diastole. The electrocardiogram showed left ventricular hypertrophy which would be another substantiating factor. Our diagnosis was an acute rheumatic carditis.

Dr. Delp: How do you explain the enlarged spleen?

Dr. Crockett: The enlarged spleen was probably due to congestive changes. The patient was in heart failure. He had edema everywhere, and I believe the congestion resulted in the splenomegaly.

Dr. Delp: Dr. Schloerb, do you believe that the electrolytes as listed on the protocol are compatible with life?

Dr. Paul R. Schloerb (surgeon): These electrolyte changes are certainly as low as one might expect to see. They are a poor prognostic sign. The normal serum milliosmol concentration is about 290 milliosmols per liter. The urine osmolarities are within the range of normal. The maximum urine osmolarity in the human is from 1,500 to 1,800 milliosmols. If one may assume from this that the basic defect is pure water intoxication, it can be calculated, using reasonable factors, that the patient had about 1,600 extra body milliequivalents of sodium, despite the low serum concentrations. It seems that the logical treatment would be to attempt simple bail-out water in order to raise the serum concentration. It can also be calculated that the amounts of mannitol given were probably insufficient. The amount of mannitol that was given diluted in the extracellular fluid would increase the serum concentration of mannitol about 50 mg. per cent, thus increasing the serum concentration only three milliosmols per liter. The patient had diuresis and weight loss, so it can be assumed that he did get some diuretic effect from the drug. I believe the dose might well have been about four times greater.

Dr. Delp: Thank you. May we have your report now, please, Dr. Caulfield?

Pathological Report

Dr. James B. Caulfield (pathologist): The substance of this case was the fairly rapid progression of heart failure in a relatively young person. The mitral valve (Figure 4) showed a thickened posterior leaflet with fused and thickened chordae tendineae. On the free edge of this valve, yellow, soft, grumose nodules were present. Within these two lesions lay the essence of this case. The thickening of the valve and shortening and thickening of the chordae are typical of healed rheumatic endocarditis. Superimposed on this healed rheumatic endocarditis were the soft, grumose nodules which showed slight calcification with infiltration by neutrophiles and lymphocytes (Figure 5). The major portion of this nodule was composed of fibrin-like material, but organization by fibroblasts was visible. This type of nodule is most characteristically seen in bacterial endocarditis.

Special stains for bacteria were negative. In view of the repeated administration of antibiotics, however, this might be expected. There was no evidence of progression of this bacterial endocarditis, and the disease process may reasonably be assumed to have been arrested.

A section of myocardium (Figure 6) showed three distinct regions. An area of coagulation necrosis (A) was of relatively recent origin. Immediately adjacent to this (B) was dense fibrous tissue with a fair number of capillaries. This area of scarring was of such size that it probably resulted from obliteration of the blood supply rather than an inflammatory focus. Adjacent to this scarred area was an area of relatively normal myocardium (C). The muscles fibers were viable in this region; there was, however, some

Figure 4. The mitral valve region shows shortening and thickening of the chordae tendineae resulting in a mild insufficiency of the valve. Verrucose nodules are indicated by the arrows.

increase in the connective tissue matrix surrounding vessels and between muscle fibers, indicating at least some degree of hypoxia in the past. Myocardial infarction due to emboli arising from valvular nodules in bacterial endocarditis may be fairly common. It has been reported that, in seven cases out of nine, emboli were visible on gross examination, and evidences of infarction were present in eight of the nine cases by microscopic examination.[1]

Areas of recent and old infarction were present in the spleen and kidney. In one of the vessels of the kidney, adjacent to an area of infarction, a small amount of the grumose material identical in appearance to that seen on the mitral valve was present. This material undoubtedly occluded the blood supply to a portion of the kidney, resulting in a recent infarct.

Sections of the lung showed greatly thickened pulmonary arterioles and arteries, a large amount of edema fluid throughout the lung, and macrophages laden with hemosiderin. The liver showed the characteristic findings of acute and chronic passive congestion. A similar picture of congestion was seen in the spleen.

The lung, liver, and splenic changes were compatible with a fairly long-standing heart failure. The evidences of infarct in the spleen and kidney, as well as in the heart, probably were a result of emboli arising from the verrucae on the mitral valve. This appeared to be a case of healed rheumatic endocarditis upon which a bacterial endocarditis had been superimposed for a period of time. The latter condition released emboli that lodged in myocardial vessels and caused infarcts which were the immediate cause of the heart failure.

Dr. Delp: Dr. Allen, if Dr. Caulfield's suggestion of healed bacterial endocarditis is accepted, do you believe that the healing could have been spontaneous?

Dr. Max Allen (internist): I have never seen it, but I am inclined to agree with Dr. Caulfield.

Dr. Delp: Dr. Rankin?

Dr. Thomas J. Rankin (internist): There is about two per cent spontaneous healing of subacute bacte-

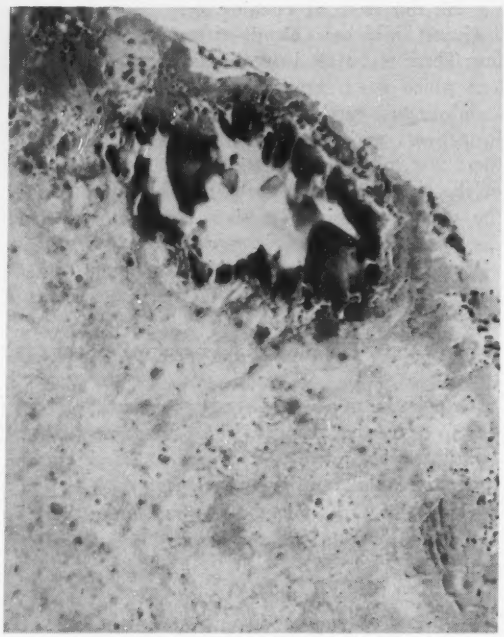


Figure 5. A section of a nodule from the mitral valve showing calcification and inflammatory cell infiltration near the margin. The remainder of the material is fibrin with a few cell remnants.

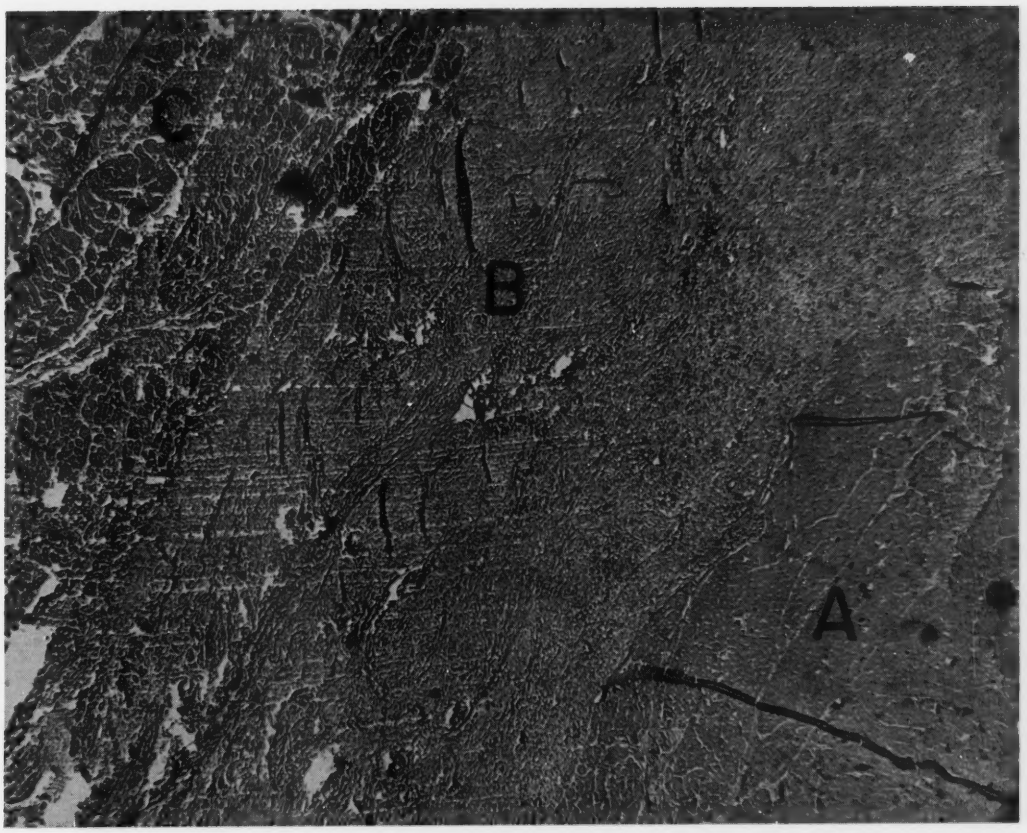


Figure 6. A section of myocardium. At "A" coagulation necrosis with swelling and smudging of the cytoplasm and loss of nuclei is apparent. Area "B" represents scar tissue with prominent capillaries. Area "C" indicates viable myocardium.

rial endocarditis, but I have some doubt of its existence in this case because of the continued illness of the patient since May.

Dr. Robert Weber (internist): I believe he had received antibiotics during the preceding six months.

Dr. Delp: It was reported that he had received sodium salicylate and penicillin for a period of time in September. While he was in this hospital, he received three doses of 1,200,000 units of benzathine penicillin administered on the basis of the probability of his having acute rheumatic fever. There are numerous reports of individuals with subacute bacterial endocarditis who supposedly had a spontaneous recovery. The one suggestion of bacterial endocarditis in our patient's history was the pain in his kidney, and this should have suggested embolism. The enlarged spleen would possibly suggest past bacterial endocarditis, although the explanation of an increased portal pressure and enlargement of the liver would be sound.

Pathological Anatomical Diagnosis

Primary

Healed rheumatic myocarditis and endocarditis, primarily involving the mitral valve.

Healed bacterial endocarditis involving the mitral valve.

Healed infarcts of the spleen and kidneys.

Hypertrophy and dilatation of the heart.

Acute and chronic passive congestion of the lungs, liver, and spleen.

Multiple small, recent pulmonary infarcts.

Coagulative necrosis of the interventricular septum and the posterior and lateral portion of the left ventricular musculature.

Agonal gastric petechial hemorrhages.

Hyperplasia of the islets of Langerhans.

Reference

1. Brunson, J. G., Coronary embolism in bacterial endocarditis, Am. J. Path., 29:689-701, 1953.

The President's Message

DEAR DOCTOR:

Fall is all but upon us. During the hot months of the summer, many of the local medical societies have suspended much of their activities, giving their members well deserved time off for vacations and pursuit of summer fun. Now the time comes to resume their activities in promoting the public health through our societies. We hope you will all attack your problems with renewed vigor.

Your state society has not been inactive. Many committees are forging ahead with their assigned tasks and are making impressive inroads in solving the problems at hand. Let me urge all members to attend these meetings as requested by their chairman. Each of you has much to contribute. The pace of meetings will be accelerated as the winter months approach. Again if you have a particular interest in some committee, let us know your desires so that you may be invited to attend these meetings.

I know that by this time many of you have had the pleasure of meeting the two new members of our staff. James Imboden has been with us since July as executive assistant and has impressed us with his devotion to duty and willingness to serve. Dallas Whaley has taken over the business management of the JOURNAL and will also assist in the executive office. You will find him eager to be of service and sincerely interested in our problems. Oliver Ebel, hard-working and faithful as always, completes a strong executive team for your society.

One innovation is to be tried this year. In order to form a better liaison between the Council and our committees, one member of the executive office team and one member of the executive committee have been assigned to meet with each committee. It is hoped that this will aid communications between the groups and make for better efficiency.

Fraternally yours,

Glenn R Peters M.D

President

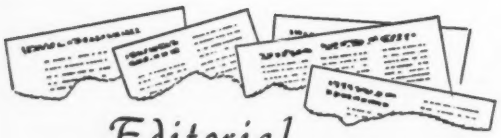
Just BROWSING

If you think you have had complicated cases lately, read of the problems which John W. Parsons described in a report presented at the 1867 Annual Meeting of the Kansas Medical Society, under the title of "Efficacy of Persulphate of Iron in Arresting Hemorrhage."

"*E. M.* got drunk and slept in the woods on the night of January 31st. The exposure froze both feet up to the tibio-tarsal articulation, and also brought on an attack of double pneumonia. For 30 days he lay in a very critical condition. The feet, in the meantime mortified; the line of demarcation having formed close up to the tibio-tarsal articulation. On the 5th of March, Dr. Larey and myself examined him and found he had recovered from pneumonia, had bed sores, abscesses over his hips, sinuses and abscesses in his legs—particularly the right leg, which to use the graphic expression of his brother, 'felt like a rotten water-melon.' About the middle of his leg was a huge abscess, extending from three inches above the line of demarcation quite up to the knee. From a small opening at the middle and inner side of the leg issued a large quantity of unhealthy pus. He had hectic fever, and his appetite was failing rapidly. The bottom of the line of demarcation was more than half an inch wide, and displayed nothing but necrosed bones. We decided that amputation offered him the only chance for life. We were prepared to operate. Dr. Larey gave the chloroform, and I performed the lateral flap amputation—lower third of each leg. He lost very little blood. The flaps were brought together with sutures, and dressed with dry lint. Three days afterward we dressed the stumps, and while handling the right leg we found the abscess had increased in size, and suddenly arterial blood began to flow rapidly from the opening. We judged from the amount of bleeding that the posterior tibial artery had sloughed. Dr. Larey compressed the femoral artery and *I injected about half an ounce of the liquor ferri persulphatis. The bleeding instantly ceased, and did not return again.*

"The next day quite healthy pus came from the abscess and it soon diminished in size and healed. At this date the stumps are quite healed; he eats and sleeps well; smokes, swears, and chews tobacco as freely as ever; in fact his health is as good as ever—(April 2d). This I consider a remarkable case, and the arrest of hemorrhage by this means is far better than a second amputation above the bleeding point, which would have been perfectly justifiable. Hardly a more unfavorable case could occur, and yet, the result has been very satisfactory."

The doctors didn't have antiseptics or antibiotics, no glucose infusions or transfusions, not even cortisone; yet with patience, persistence, and some good luck the patient got well!—*O.R.C.*



Editorial COMMENT

More About Medicare

Several readjustments in the Medicare Program have produced changes which will affect participating physicians. These, in addition to questions frequently asked about this program, will be discussed, and we hope that clarifications will improve the efficiency of operations.

Following a year of curtailed operations while dependents of service men were directed to receive their care at Armed Forces facilities, it now appears that these hospitals are crowded and unable to cope with the increased demands made upon them which will again increase the amount of Medicare work to be done by civilian physicians. It is anticipated this increase will be gradually noticed, and that it will be most pronounced in those cities adjacent to Armed Forces bases. The projected increased activity may also be temporary, but has already been felt in the Claims Department of the Blue Shield offices.

Because the Congress scrutinized this program with some care prior to reducing its budget a year ago, the Washington Medicare office is quite conscious of expenses. They still insist the program is designed to pay usual physicians' charges that might be expected from private patients of the $4,000 income bracket. A fee schedule listing maximum payments is incorporated into the contract signed by the Kansas Medical Society but when made, Society officers were of the opinion the maximum allowable would rarely be touched. It was the intent that each physician should list the amount he would expect to collect from a patient of moderate means in his private practice. This amount would be paid him unless it exceeded the ceiling of the contract. For that reason the Society was requested not to publish the maximum fees.

The philosophy behind this negotiation appeared interesting. It represented a departure from the usual formula of a government contract. It purported to preserve the physician-patient relationship and to provide for a minimum of governmental intervention. The patient would select his own physician, and if eligibility requirements were fulfilled, the physician would perform the service for his usual charges. The government would pay his individual fee.

The Kansas Relative Value Scale was approved by the Washington Medicare Office, and with the exception of some dozen procedures, a maximum point value of $4.50 was accepted. Of the 12 deviations, five exceeded this point evaluation and seven, most of which involved gynecological procedures, were somewhat below that amount. Therefore, except for the above mentioned differences, the more than 1,800 separately listed procedures were rated at $4.50 a point.

In practice the theory did not work out. It soon became apparent that many physicians were charging more than $4.50 a point for Medicare families. It appeared, because of this frequent situation, that the Kansas Medical Society had negotiated a secret contract which it was unwilling to describe to the members. This definitely was not the intent.

In the future it is hoped that physicians filing a claim with Medicare on the claim form under Section V, Item 29, will be required to check either Item A or Item B. These should be rated with care. If Item A is checked, the physician says in effect that he will accept as full payment for the services rendered either his charges or the maximum allowed under the Fee Schedule, whichever is less. Such cases will be processed immediately in the Blue Shield office and payment will be made.

If Item B is checked, the case will automatically be sent to a Kansas Medicare Review Committee. This claim implies that exceptional care was necessary, and the physician must support his more than usual charges with an additional report which will enable the Committee to substantiate his claim. Many of these cases will subsequently be sent to Washington for adjudication.

Charges above the usual maximum allowed can be paid and generally are paid. There is, however, a considerable delay. The delay may be occasioned by any combination of the following factors, but in the future should never again produce the difficulties that have occurred in the past. The Blue Shield office processes the normal claims. The Kansas Medical Society handles only the exceptional cases. The Review Committee contributes its time in this unwelcome task without recompense and performs this work as a service to the Kansas Medical Society. Ex-

perience in the operation of this program will increase its efficiency.

In the beginning, communications between the two processing offices had to be established with relation to this program. The Society has now appointed five Review Committees, but even yet, they will meet only infrequently; where approval through the Washington office is required, a still further delay must be expected.

However, every effort is made to handle this work fairly, and every reasonable claim supported by a statement from a physician will be handled. The Society is grateful to those members who have continued to cooperate with this program often under annoying circumstances. It is hoped the above explanation concerning the Fee Schedule can resolve some of the cases which previously were delayed. Should further questions arise, the Society will welcome additional correspondence and will attempt to provide the answer.

Health Care for the Aged

The Forand Bill is tabled for this session of the Congress. Glenn R. Peters, M.D., president, went to Washington at the request of the American Medical Association and submitted testimony opposing the passage of this bill before the House Ways and Means Committee. On the day he visited the Committee, he heard Walter Reuther present his plea for the passage of this bill.

It now appears certain that exceptional pressure will be brought to bear upon the Congress next January for the passage of legislation which will provide hospital and at least some medical benefits to aged persons paid for from Social Security funds. There is no question but that this will constitute a major crisis in the effort to preserve free enterprise as it was known in the past. There are those who predict passage of such legislation during the 1960 session of Congress. It seems possible even to some who believe free enterprise can still be saved that just talking about it may no longer be enough. Action may be required, and in Kansas a considerable number of ideas are ready for exploration.

Proponents of socialized medicine begin with *the premise* that the aged cannot afford to pay for their health care. This results in neglect or in having the services performed for little or no payment to the physician. There is no assurance that the first premise is based upon fact, nor is this the first time in history that an attempt has been made to get the public to believe a statement merely by its repetition. The medical profession has considerable evidence to the contrary, but in the face of an emotional appeal, logic becomes difficult to sell.

A second premise is that the insurance principle for prorating health care costs is the only sound solution. They argue that adequate insurance is not available for the aged. The medical profession concurs in the support of insurance, and while insurance for the aged is a recently developing field, it is becoming available and will rapidly expand in the very near future.

Premise No. 3 is that only through compulsory participation can the protective base be large enough to solve this problem. The Kansas Medical Society emphatically rejects this premise and believes that insurance can be handled on a voluntary basis that will be attractive and far more economical than any supplied by the Government.

Premise No. 4 is that no one will do anything about this problem, so the Government must. This also is untrue. The Kansas Medical Society is exploring many possible solutions both through Blue Shield and commercial insurance carriers. The Lyon County Plan, familiar to all members of this Society, is an experiment in this direction. Within a few months, Blue Shield will begin a drive for new members in which applicants in any age will be accepted. Blue Cross also is participating in this plan. The hospitals of Kansas are considering the problem seriously enough that they are voluntarily offering to accept less than going charges for the sake of inaugurating the program. Commercial insurance companies have formed a Health Insurance Council and are cooperating toward the preparation of a policy for aged persons which can provide them with necessary benefits at a cost that they can afford to pay.

It is understandable that a crisis should appear on this subject because the impact of an increased aging population has only now become noticeable. Health care, receiving the spotlight at present, is only one facet of this problem involving every social and economic consideration. Therefore all persons are concerned upon all phases of living, and unless enough of the population still believes in the democracy upon which this nation was founded and unless enough of the population retains confidence in free enterprise, whatever the doctor proposes on the question of health care for the aged will be insufficient to stem the tide.

There is much to be done in the health field, but the basic problem is a far greater one than this. Here also the doctor can lead the way, but with him must come all people working together toward solving the problems of housing, recreation, and many other factors. Anything short of that will inevitably produce eventual disaster. Here, however, medicine is afforded a remarkable opportunity for a closer cooperation with all segments of people. Here again the Kansas Medical Society finds itself with a responsibility and an opportunity to fulfill it. It is hoped that each member of the Society will cooperate in programs that are subsequently announced and that through his own initiative will achieve the desired result of providing good life for the aged, doing so in the American way.

The Business Side of Medicine

Watch Your Non-Business Expenses

FLOYD F. WEHRENBERG, ***Kansas City, Missouri***

All doctors are concerned with their profit from their profession, but too many stop at that point. It is important that your professional profit be high, but that alone cannot guarantee that you will have adequate funds set aside for retirement. There are other expenditures that need to be considered and controlled.

The rest of your deductible expenses are usually referred to as "Class B" or non-business expenses. Some of these, such as taxes (personal property, real estate, sales, and excise) cannot be controlled. However, the amount you pay for non-business interest, for contributions and medical expenses is also deductible and will have an effect upon your net gain.

Non-Business Interest

The interest you pay on non-business loans is a "Class B" deduction. You may question that this amount is controllable, but it is in some cases.

For instance you may have a large bank account that you have allowed to accumulate while you are paying five per cent or six per cent interest on money you have borrowed and repaying it according to the original plan. Perhaps you could be using some of that money to repay your loan in advance or on the original terms and thereby realize a savings. Some mortgages may be paid off in a lump sum at a greatly reduced rate of interest after a certain period of time. Others permit double payments in one month thereby enabling you to apply the entire second payment to the principal.

Mr. Wehrenberg is Missouri-Kansas manager, Professional Management Midwest, 4010 Washington Street, Kansas City, Missouri.

Although interest is a deductible item, it will usually be to your advantage to reduce the amount of interest you are paying. Only if you are in an unusually high income bracket can you make money by paying interest.

There is another risk. You may contract to pay off a mortgage during a period of inflation at an inflated price. When economic conditions level off or recession sets in, you will still be paying the inflated price. How much better if you have paid it with inflated money!

Generally speaking if a doctor retains approximately three months' business expenses in his bank account, that will be sufficient. The rest should be put to work for him.

Contributions

The matter of contributions is also worthy of consideration. The deduction for gifts or contributions by an individual is generally limited to 20 per cent of the taxpayer's adjusted gross income for the year. The 1954 Code, however, increased this to 30 per cent if the extra 10 per cent is paid to a church or association of churches, a tax-exempt educational organization, or an exempt hospital.

If you have a long-range contribution plan, this angle should be given attention. You may purchase property now to be donated at a future date. If that property increases in value, as it may well do in an inflationary period, you are permitted to deduct the current market value of the property at the time the contribution is made, rather than the purchase price.

(Continued on page 424)

The Kansas Press Looks at Medicine

***Editor's Note.** In this section the* JOURNAL *reproduces editorials relating to medicine which have appeared in the lay press. An effort is made to include both favorable and unfavorable comments, and the Editorial Board in no instance assumes responsibility for the opinions expressed.*

PHONE BUSINESS

Those doctors who are reported to be charging $1 for answering telephone calls are moving dangerously near to parody. For already in the public mind doctors are beginning to be thought of as persons who send out the bill first and the prescription later.

The American Medical Association, to its credit, has recognized the evil in the dollar phone call practice, and recommends in the official *AMA News* that fees for home and office calls should be sufficiently high to compensate for occasional services such as telephone calls, medical reports, and the filling out of insurance forms.

In Kansas, fortunately, most doctors still retain high standards of service to the community and to mankind. But in many of the urban centers of the country, doctors are rapidly pricing themselves in the direction of socialized medicine.

It would be tragic if, on the threshold of major medical breakthroughs in diseases that have baffled through all of man's history the price of medical care should rise so high as to deny it to anybody.—*Topeka Daily Capital, August 4, 1959.*

SOCIALIZED MEDICINE SLIPS IN THE WINDOW

The American public now spends $6 billion a year for hospitalization. Of this 44 per cent is paid by our various governments. The federal government's care of its military and their dependents accounts for part of it. The welfare programs of state and local government make up the rest.

So this type of medicine already is 44 per cent socialized. But that is only a start. There are millions more who participate in Blue Cross and Blue Shield or protective insurance programs. They all are socialistic in essence even if control is in the hands of private rather than governmental agencies.

The argument against socialized medicine continues to wage hot. It has waged even hotter in recent weeks because of a measure before Congress which would further enlarge federal operations in the hospitalization field.

The statistics indicate that while the door has been successfully barred against socialized medicine, it has been slipping through the side windows with surprising speed. Before the argument ends socialized medicine likely will be an accomplished fact. The only remaining task will be to close small gaps and to provide better coordination of the work of the various public private agencies in the health field.—*Hutchinson News, August 3, 1959.*

GOVERNMENT ROLE IN MEDICINE IS GROWING

One of the most vigorous fights against the government's role in ordering our lives is the battle against socialized medicine.

For better or for worse, the battle is being slowly lost.

Recent testimony before a congressional committee showed that government already is paying 44 per cent of the nation's annual $6 billion hospital bill.

Fourteen per cent is paid by the federal government, mostly for the care of servicemen and veterans. The other 30 per cent is borne by state and local government for welfare cases, those in mental hospitals and related institutions.

With such powerful groups as the American Legion constantly lobbying for more medical service

to veterans, and with the voting power of the aged and infirm on the increase, this trend is not likely to be reversed.

Individual Americans will bear the other 56 per cent of hospital costs—and related physicians' fees—only if private insurance coverage keeps pace with the increases in costs.—*Hutchinson News, July 22, 1959.*

Discouraged Britons

A few months ago *Harper's* magazine published an article on Britain's socialized medicine system. The author had much praise for it, and cited the fact that when he suffered a chipped elbow he was given free care.

This brought a letter from an American doctor, which *Harper's* published in its July issue. This doctor found that statements in the preceding article "sound like the ecstasies of a confirmed freeloader who has discovered a saloon which still offers the old-time free lunch." Then he went on: "There is a widening gap between the quality of medicine as it is practiced in the United States and in Great Britain. According to Dr. Alistair Luton, an English physician now in the United States under a Ford Foundation grant, this is a typical English doctor's day:

"50 patients before lunch

"50 patients after lunch

"20 or 30 house calls daily.

"Should we wonder that the English doctor is discouraged and unable to keep up with the march of medicine?"

Deterioration of standards and services is always a result of socialism—socialized medicine included. It could happen here, just as it has happened in England. And anyone who thinks that the socialized medicine issue is dead so far as the U. S. is concerned had better think again. A current proposal, for instance, would provide government-paid medical and hospital care to people drawing Social Security payments. Once that precedent was established, it would be just a matter of time before other groups demanded and received similar treatment.

As the old Chinese proverb has it, the longest journey begins with a single step.—*Emporia Gazette, August 1, 1959.*

Medical Degree In Less Time?

The nation's expanding population, and especially the increase in the proportion of older people, has raised the specter of a doctor shortage. Columbia's president, Grayson Kirk, has estimated that by 1975 the nation's present and projected medical schools will be able to turn out only two-thirds of the number of doctors needed even to maintain present standards of medical care.

One interesting new approach to the problem, however, is contained in Boston University's announcement of a plan to train doctors in six years instead of eight, by use of a year-round schedule in which undergraduate and graduate work would be integrated into "a program of general education with medicine as a major." It aims at training doctors not only faster but better, giving them a firmer foundation in science and liberal arts, but co-ordinating preparatory courses in such a way as to simplify the teaching of purely medical subjects.

The progress of the plan will be watched with a good deal of interest from both inside and outside the medical profession. If it works out as its sponsors confidently predict, it could lead to a better use of scarce medical teaching facilities. It also would considerably lighten the burden on prospective medical students, many of whom are undoubtedly deterred by the exceptionally long period of preparation the profession now requires.—*Reprinted from New York Herald Tribune in Kansas City Star, August 12, 1959.*

The Business Side of Medicine

(Continued from page 422)

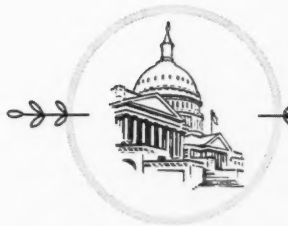
And you would not be required to pay any tax on the gain involved.

Medical Expenses

An accurate record should be kept of medical expenses. The Code now permits deduction of medical expenses in excess of three per cent of adjusted gross instead of five per cent. Amounts paid for drugs and medication are allowable in excess of one per cent. Insurance received must, of course, be deducted before claiming the allowance.

It is important for you to set up a separate account for medical expenses and keep a record of all expenses paid during the year. You can never be certain how much it will be, and if at the end of the year you do not have sufficient expenses to deduct, nothing is lost. However, failure to segregate them as you go along may involve a loss to you if you learn late in the year that you will want to claim them as a deduction.

These expenses are important to your financial program, so give them the attention they deserve.



Washington HIGHLIGHTS

This summary of Washington news is prepared by the A.M.A. Washington Office for distribution to state medical journals.

Forand Bill Tabled Till Next Year

The House Ways and Means Committee has put aside until next year the so-called Forand bill which is opposed vigorously by the medical profession.

But supporters of the legislation have made clear that they will press for action by Congress next year when politics will be paramount because of the presidential and Congressional elections in November.

The Ways and Means Committee took no action on the legislation after five days of hearings highlighted by the Eisenhower Administration lining up with the medical profession in opposition to it.

Arthur S. Flemming, Secretary of Health, Education and Welfare, told the committee that "it would be very unwise" to enact such a bill. He warned of "far-reaching and irrevocable consequences." It would freeze health coverage of the aged "in a vast and uniform government system" and would mark the beginning of the end of voluntary health insurance for old persons, he said.

Secretary Flemming later promised to report to Congress early next year on possible alternatives, including Federal subsidies to private carriers of health insurance for the aged. But he took no position on any of the alternatives for the time being.

Summing up the hearings, Dr. F. J. L. Blasingame, Executive Vice President of the AMA, said:

"It was shown that it would be most unfortunate for the federal government to move in for political reasons and attempt in a compulsory fashion to solve by legislation problems which are being thoughtfully considered at the state and local level by the medical profession and other dedicated members of the health team."

Main support for the bill, which was sponsored by Rep. Aime J. Forand (D., R. I.), comes from organized labor. The legislation would increase federal Social Security taxes to finance hospital, surgical, and nursing home care for Social Security beneficiaries.

Although this bill has been shelved for the time being by the House Committee, the problems of the aged are being studied by a Senate Subcommittee headed by Sen. Pat McNamara (D., Mich.). The Subcommittee on Problems of the Aged and Aging of the Senate Committee on Labor and Public Welfare has held public hearings intermittently in Washington. It also planned to hold hearings in various other cities.

In his second appearance before the Senate Subcommittee, Dr. Frederick C. Swartz, Chairman of the AMA's Committee on Aging, reported that state and local medical associations "have moved promptly" to make the AMA's six-point "positive health program" for the aged "an effective and workable instrument."

Dr. Swartz said that the problem of financing health services for the aged is "a temporary, not a permanent one" because "each year, more and more of the Americans who are reaching sixty-five are covered" by voluntary insurance.

Three Housing Bills Affecting Medicine

Democrats in Congress cut back their housing program further after President Eisenhower vetoed a $1.4 billion bill. Starting with a $2.1 billion program, Democrats came down to the $1.4 billion figure in an effort to avoid a veto although it was a more expensive program than Mr. Eisenhower wanted.

After the President vetoed this bill anyway, Democrats came up with a $1 billion bill which retained three provisions of interest to the medical profession.

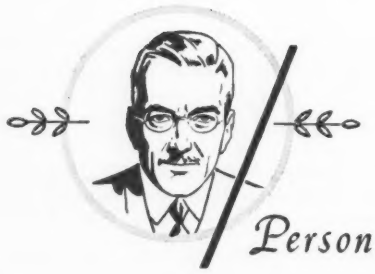
They would:

1) provide construction loan guarantees by the Federal Housing Administration of up to 75 per cent of the cost of proprietary nursing homes; 2) authorize $25 million in direct loans for construction of housing for interns and nurses; and 3) authorize a $50 million revolving fund for direct loans to help private nonprofit corporations build rental housing for the elderly.

$400 Million to Research

Congress voted a compromise $400 million appropriation for medical research. The amount was about $80 million less than approved by the Senate, but was more than $100 million above the Eisenhower Administration's request for the National Institutes of Health.

The allotments for research in specific fields included: cancer, $91 million; mental health, $68 million; heart, $62 million; arthritis, $47 million; neurology, $41 million; allergy, $34 million.



Personalities—IN KANSAS MEDICINE

Dr. Henry J. Dick, located in Burlington in July for general practice of medicine.

Doctor Dick's home was Emporia, Kansas, where he graduated from high school. He received his A.B. degree from the University of Kansas in 1950 and earned his M.D. degree from the University of Kansas Medical School in 1958. He interned at St. Joseph's Hospital in Kansas City in 1958-59.

Doctor Dick spent over a year in the medical corps in Alaska. He is married and has three children.

Dr. W. W. Orrison, Plains, announced last month he was moving to Meade and will be associated with **Dr. R. H. Hill,** in the offices of **Dr. R. M. Dougherty.**

Doctor Dougherty recently suffered a heart attack and is unable to continue general practice. He and Mrs. Dougherty moved to Lawrence this month, and he will be associated there with the Kansas University Student Health Center.

Doctor Orrison came to Plains from Minneola five years ago.

Drs. H. S. O'Donnell, Richard O'Donnell, Alfred Horejsi, and J. E. Seitz have moved their office from downtown Ellsworth to a new combination clinic, medical center, and office building near the hospital.

Dr. Edward Greenwood was a panel member on the discussion of the 1960 White House Conference on "Children and Youth" at the National Education Association's convention in St. Louis last month.

Drs. D. B. Foster and John A. Segerson attended the first international medical conference on Mental Retardation in Portland, Maine, last month.

Dr. Karl Menninger has been asked to act as consultant to the research staff for the American Bar Foundation's Committee on the Rights of the Mentally Ill.

A 16-year member of the Society, **Dr. A. R. Nash,** Parsons, closed his practice in Parsons last month and left for Sykesville, Maryland, to make his home. Dr. Nash has been practicing in Parsons for nearly 50 years.

Doctor Nash, who is eighty-eight, started his practice in Parsons in 1912. For many years he had his office in the 1800 block on Broadway.

His daughters came from Maryland to accompany him to their home.

Dr. Raymond C. Klapp opened an office in Wa-Keeney recently after closing his practice in Wichita.

Dr. Klapp received his Master's Degree at Wichita University and his Doctor of Medicine at Harvard University in 1939. He served in the United States Army during World War II for four and a half years and later was chief of surgery in Japan for two years, a civilian working for the Department of the Army during the Korean War.

Dr. Don George, a native of Edna, Kansas, has entered general and obstetric practice at the Salina Clinic. Doctor George attended the undergraduate school at the University of Kansas where he was a Summerfield scholar and was graduated with honors from the George Washington University School of Medicine, Washington, D. C.

After his graduation, he interned for one year at Walter Reed Army Hospital before he served two years as a general medical officer at Irwin Army Hospital, Fort Riley. Dr. George's father is a former U. S. Congressman from the third Kansas district.

Emporia's newest physician is **Dr. D. C. Coldsmith** who has opened an office in the same building with **Drs. A. L. Lohmeyer and J. M. Catlett.** Doctor Coldsmith will engage in general practice. He was graduated in 1958 from the University of Kansas Medical Center and served his internship at Bethany Hospital, Kansas City, Kansas.

Doctor Coldsmith attended high school at Coffeyville and was graduated from Baker University in 1949. He served four years as a YMCA worker and for one year was director of the boys' work for the YMCA at Topeka, before entering the K. U. Medical School in 1954. While waiting to get into medical school, he served a year as pastor of the Methodist Church in Tonganoxie.

The University of Kansas Medical Center surgeon, **Dr. Stanley R. Friesen,** will leave for a year's study. The professor of surgery and oncology at the University has begun a sabbatical leave of absence, starting last month, for a year of study in England and Europe. He and Mrs. Friesen and their four children left for New York and were scheduled to sail on the Holland-American Line ship *Maasdam*. Their home until July, 1960, will be in London, where Doctor Friesen will headquarter at the University of London. He will have research laboratories at two of that University's Schools, the Medicine-Postgraduate Medical School and St. Thomas' Medical School.

At the Postgraduate Medical School, Doctor Friesen will work with Dr. A. G. E. Pearse, reader in histochemistry, who has been on the visiting faculty of the University of Kansas postgraduate course in histochemistry. He also will work with Professor Ian Aird at the school. He will do basic investigative work of the ganglion cells of the esophagus, pylorus, and intestine. He will carry on his studies by means of histochemistry and physiology.

In September Doctor Friesen will present a paper at the International Society of Surgeons at Munich. He will make professional visits in Vienna, Helsinki, Glasgow, Stockholm and London.

Dr. H. B. Stryker, Concordia, gave a talk on diseases of the heart and their preventions and treatments to the Concordia Kiwanis Club meeting recently.

Dr. Charles T. Stephens recently joined the staff at the Minneola Clinic and is associated with **Dr. D. L. Richards.** Doctor Stephens was an intern at the Wesley Hospital in Wichita during the past year. His education was received at Central College, McPherson, Kansas, and the School of Medicine, Missouri University, Columbia, Missouri, where he received his Doctor's Degree in 1957. Doctor Stephens is a native of Ashburn, Missouri.

Dr. L. Claire Hays, Cedarvale, has been appointed to the Advisory Commission for the Norton Sanatorium by Governor George Docking.

Governor Docking's appointment called attention to the "integrity, patriotism, and ability" of Doctor Hays, and appointed him for a four-year term.

Dr. Craig Clark has recently opened an office in Junction City. Doctor Clark came to Junction City from the staff of the Bethany Hospital in Kansas City.

Doctor Clark attended elementary schools in Wichita and graduated from Wichita East High School. He received a Bachelor of Science degree in Electrical Engineering from Kansas State University in 1952. He had attended Wichita University three years before graduating from Kansas State. He received his Doctor of Medicine Degree from the University of Kansas Medical School in June, 1958.

He is a member of Phi Beta Phi, honorary medical fraternity.

Dr. Harold Mauck of Stockton has been appointed Rooks County coroner. He replaces **Dr. Vale O. Page** of Stockton, who resigned.

Dr. Leo Robinson, Iola physician, was elected president of the Iola Board of Education recently.

Topeka doctor retires. **Dr. and Mrs. C. K. Schaffer** left Topeka last month for their new home in Santa Cruz, California. He has been in Topeka since 1927 and specialized in geriatrics. His office has been closed since the first of August while he prepared for the move.

NEW MEMBERS

John Aunins, M.D.
4853 Hemlock
Wichita, Kansas

Warren E. Meyer, M.D.
205 KFH Building
Wichita 2, Kansas

KMS Obituaries

Clifford C. Nesselrode, M.D.

Dr. Clifford C. Nesselrode, 79, physician and surgeon in Kansas City for more than half a century and past president of the Kansas Medical Society and the American Cancer Society, which he helped to organize, died at St. Margaret's hospital July 18. The 79-year-old doctor announced his retirement three years ago, but continued daily visits to his office.

Doctor Nesselrode was born in Wellington and was a member of the first graduating class from the University of Kansas Medical School in 1906.

In 1948 he was elected president of the American Cancer Society and received the first distinguished service medal awarded by that society. He had previously served as the president of the Kansas Medical Society and head of the American Cancer Society, Kansas Division.

Doctor Nesselrode helped establish the Kansas City, Kansas, Chamber of Commerce. In 1917 he was elected its first president. He was also director of the Commercial National Bank and the Kansas Trust Company.

He was former chief of the surgical staff of the St. Margaret's Hospital.

Doctor Nesselrode did his postgraduate work in surgery at Harvard Medical School and London Hospital, London, England. Being in London at the outbreak of World War I, he was assigned to a task of aiding Americans to secure passage to the United States.

He was commissioned a captain in 1917 and served in the medical corps of the U. S. Army, being discharged with the rank of Colonel. He stayed in the officers' reserve corps from 1919 to 1953. During World War II, he was examiner for Draft Board 5.

Doctor Nesselrode was professor of clinical surgery at the University of Kansas from 1908 to 1947.

He had been Governor for Kansas many years for the American College of Surgeons; charter member of the American Association for Surgery or Trauma; Head of the Kansas City, Kansas, expansion program; director of Red Cross; first president of the Kansas City Surgical Society; and a member of the Founders Group of American Board of Surgery. Surviving, in addition to his wife, are a daughter, two sons, two sisters, and six grandchildren.

Frank A. Eckdall, M.D.

Dr. Frank A. Eckdall, Emporia's senior physician, died Friday, July 30 at Newman Memorial County Hospital after an illness of several months. Doctor Eckdall was born in 1872 at Emporia, where he attended elementary and high schools. He studied pharmacy while working at Emporia drug stores, and in 1894 passed the state pharmacy examination. After eight years as a druggist, he entered the Louisville, Kentucky, Medical School, where he took two years' work, then transferred to Rush Medical School, Chicago, Illinois, where he received his M.D. degree in 1901. That same year, he returned to Emporia and began practicing medicine with Dr. L. D. Jacobs. He was the Emporia physician for the Santa Fe from 1904 until 1945; had been chief of staff at St. Mary's Hospital and of Newman Hospital; president of the Lyon County Medical Society; president of Santa Fe Medical and Surgical Societies; vice-president of the American Association of Railway Surgeons of America. He was a member of the First Presbyterian Church; Blue Lodge No. 12, Scottish Rite; and Knights Templar.

He was married in 1904 and fathered three children, Lida, now Mrs. Raymond Lee, Kansas City, Frank F. Eckdall, an Emporia attorney, and Dr. Funston J. Eckdall, who had a partnership with his father in 1937.

Dr. Eckdall had been a member of the Kansas Medical Society since 1933.

Blue Shield

Results of a statewide utilization study conducted by the Joint Study Committee on Hospital and Medical Economics completed early this spring showed sufficient evidence of faulty use of Blue Cross benefits to justify a continuing effort to reduce this excessive utilization. The study indicated that about six per cent of the Blue Cross case cost was in the questionable use category.

Members of the committee, representing the Kansas Hospital Association, the Kansas Medical Society, Kansas Blue Cross and Kansas Blue Shield, have expressed the feeling that any future program for reducing over-utilization should be in the form of an educational approach, rather than as an attempt to establish controls over individual cases.

On the other hand, the amount of excess use discovered during this study was not as great as had been anticipated, and members of the committee, as well as the Kansas Medical Society House of Delegates, want to find a method by which any faulty use may be brought under control without causing concern on the part of hospitals, physicians, and the public that this problem is being over-emphasized.

A Voluntary Committee

In the spring of 1958, a Joint Study Committee on Hospital and Medical Economics was set up to explore hospital and medical costs and utilization. The Medical Society, Hospital Association, and Blue Cross and Blue Shield had equal representation, with H. M. Glover, M.D., Newton, chairman. He said at that time:

"In view of the concern about rising cost of hospital-medical care throughout the country, occasional difficulty in getting a patient admitted to the hospital, and the possible overuse of prepayment programs, these three statewide organizations have voluntarily set up this study committee."

Within three months over 300 physicians and 145 hospitals throughout Kansas were participating in a statewide study of hospital usage which was the first action of the Study Committee. A careful examination was made of sample cases in every hospital in Kansas. Physicians checked the hospital records, finding the reason for admission, the length of stay, and the services used.

As the study progressed, it was agreed that there was enough questionable use to justify the development of a specific program to help eliminate excess use and particularly to serve as a reminder to physicians and hospitals that an effort must be made to prevent abuse of prepayment benefits.

The committee emphasized in its plans for a future program that as a general principle, the careful use program should not attempt to set up controls on an individual case basis because of the implications of interference with medical practice. The nature of the program should be primarily educational with reports being made of use trends in each hospital.

Local Review Committees

As a part of the future program to study and cut down overuse, hospital utilization study committees will be established on each hospital medical staff. These committees would serve two purposes:

1. Back up an individual physician who might have difficulty in persuading a patient that further hospital care was unnecessary, and

2. Report to the full medical staff on use trends both locally and statewide and discuss general ways in which abuse might be eliminated. (Efforts of this

kind will serve to keep the subject of careful use before the doctors.)

Set Up "Careful Use" Program

The procedure adopted by the Study Committee can be outlined as follows:

- The first step should be a letter from the President of the Kansas Medical Society to all physicians in the Society and the President of Kansas Hospital Association to member hospital administrators outlining the need for the "careful use program" and indicating the type of follow-up which is being proposed.
- The program would be organized through the statewide Blue Shield Relations Committee and based on the District Blue Shield Relations Committees.
- Physicians who served as chairmen in the utilization study should be asked to become members of their respective District Blue Shield Relations Committees.
- The chairman of each Blue Shield District Relations Committee would call a meeting of his District Committee during the fall, the main agenda at these meetings to be a discussion of the "careful use program" and the functions of the Hospital Utilization Study Committee.

Dr. Glover has this to say in a summary of the study:

It is our feeling that the adoption of the proposed program of establishing hospital utilization study committtees by the Kansas Medical Society will go far toward keeping the idea of careful use of prepayment plans before the physicians and hospitals and that similar efforts should be made by Blue-Cross-Blue Shield in its Member Council program to inform the public of the need for careful use so as to bring about the most efficient use of the prepayment dollar. Our committtee will continue to meet periodically to study the results of the methods which emerge out of the local hospital committee approach.

Other members of the committee are Ivan D. Anderson, Emporia, Walter B. Coburn, Kansas City, representing the Kansas Hospital Association; E. Ray Gelvin, M.D., Concordia, who with Dr. Glover represented the Kansas Medical Society; Carl C. Lamley, Topeka, and Joe Smercheck, Manhattan, Blue Cross; and Russell Mosser, Lawrence, and E. J. Ryan, M.D., Emporia. Blue Shield ex-officio members were Thomas P. Butcher, M.D., president of the KMS at the time; Austin J. Evans, president of KHA at the time; Oliver Ebel, Executive Secretary, KMS, and Charles S. Billings, Executive Director, KHA.

American Association of Medical Assistants

More and more doctors throughout the country are coming to know what the American Association of Medical Assistants is doing to assist with the education of their members, and more and more interest is being shown by the medical societies, both county and state.

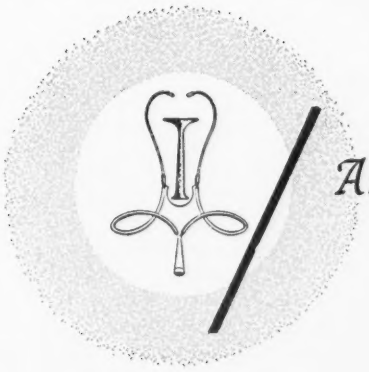
A Central Office with an Executive Secretary has been opened in Chicago. Plans are underway for educational courses which will be offered to those presently working in the field and to those interested in entering the field as medical assistants. The work in the doctor's office is highly specialized, and trained medical assistants are necessary to assist the doctor and to relieve him of many of the details which are a part of the office routine.

The American Medical Association and some state and county societies are aware of the need and have aided the medical assistants to form the American Association of Medical Assistants. Some few physicians who disapproved of the movement on the basis that it tended to create a union and may result in unreasonable demands by assistants upon their employers, have found nothing to substantiate their fears.

One of the principal purposes of the Association is to encourage girls engaged in this activity to become better educated, better trained, better qualified and more capable employees in their chosen vocation.

Every county medical society has an Advisory Committee in counties where the girls are organized. There committees back the girls and help them with their problems. The American Association of Medical Assistants is an infant who needs the support and "The Assistant" of every physician in the A.M.A. With a strong organization, its program of education will go into high gear and ultimately it will be the doctor who will reap the greatest benefits—well-trained, efficient help for his office will be more readily available. The greatest asset of this group is absolute sincerity of purpose. The basic reason for organization on all levels has been the desire of the members to further their education in this allied medical field. This desire and its fulfillment means that the medical assistant is trying to do a better job for her employer. There has never in the history of any chapter, never locally, state-wide or nationally, been any intent or even desire to organize for purposes of forming a union. The medical assistants are recognized and sponsored by the County, State and American Medical Associations.

The Third Annual Meeting of the Association will be held in Philadelphia, October 16-18, at the Benjamin Franklin Hotel. Medical Assistants and doctors are invited to attend.



Announcements

Professional meetings, conferences, and postgraduate courses of national importance are listed for the DOCTOR'S CALENDAR. ***Notice of the session is posted in advance to allow the physician time to make preparations.***

The Council on Postgraduate Medical Education of the American College of Chest Physicians will present the following Postgraduate Courses this fall:

14th Annual Course, CLINICAL CARDIOPULMONARY PHYSIOLOGY, Edgewater Beach Hotel, Chicago, October 5-9

12th Annual Course on DISEASES OF THE CHEST, Park Sheraton Hotel, New York City, November 9-13

5th Annual Course on DISEASES OF THE CHEST, Amabassador Hotel, Los Angeles, December 7-11

The course on Clinical Cardiopulmonary Physiology is the second to be presented by the Council on this timely subject. The New York City and Los Angeles courses will offer the most recent advances in the diagnosis and treatment of chest diseases—medical and surgical.

Tuition for each course is $100 including round table luncheon discussions.

Further information may be obtained by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Illinois.

The Annual Fall Conference of the Kansas City Southwest Clinical Society, October 5 through 8, in the Municipal Auditorium, Kansas City, Missouri, will offer a postgraduate medical program featuring 17 distinguished doctors of medicine from throughout the United States.

Through symposia, panel discussions, and forums there will be depth of coverage of such subjects as Gastrointestinal Diseases, Cardiovascular Diseases, Trauma, Emphysema, Hepatobiliary Diseases, Carcinoma of the Cervix, Headache, Abdominal Pain, Anemias, Gastrointestinal Bleeding, and The Biochemistry of Disease. Postgraduate Breakfast Seminars and Round Table and Specialty Luncheons offer an opportunity for the attending physicians to ask questions of the guest speakers and to enter into the discussions. A Workshop on "Anticoagulants" at Kansas City General Hospital will be available to those desiring to devote one afternoon to first-hand demonstration and discussion by a teaching staff.

A highlight of the meeting will be a Trans-Atlantic Medical Conference which will link the Kansas City Southwest Clinical Society's Fall Conference with a concurrent meeting of the Royal Society of Medicine in Sheffield, England. This will be a Clinicopathologic Conference on Cardiopulmonary Disease with four of the guest speakers appearing on the Clinical Society program matching wits with four distinguished British physicians.

An outstanding array of scientific and technical exhibits will round out the conference. All physicians who are members of their county medical societies are cordially invited to attend.

The American Board of Obstetrics and Gynecology, Inc. announces that the next scheduled examination (Part 1), written, and review of case histories for all candidates will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, January 15, 1960. Candidates must submit case reports to the office of the Secretary within 30 days of being notified of their eligibility to Part 1.

Current Bulletins may be obtained by writing to:

Robert L. Faulkner, M.D., Executive Secretary and Treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

The Kansas Trudeau Society will hold its annual meeting Thursday, October 22, at the Hotel Lassen in Wichita. The meeting will be in conjunction with the Kansas Tuberculosis and Health Association's two-day meeting which will be held there the 22nd and 23rd.

Several Kansas physicians will be participating in the meetings which will begin at 10:00 a.m. Thursday and continue through the next day. Dr. G. M. Tice, Kansas City, will be the guest speaker of the 6:30 Trudeau Society and TB Association's dinner held Thursday evening at the hotel. His topic will be "Radiation and Health."

Other doctors to be on the programs are:

Dr. James C. Dowell, Lawrence—presiding
Dr. John K. Fulton, Wichita—Treatment of "Resistant" Pneumonias
Dr. Ernest W. Crow, Wichita—Cardiac Arrhythmias
Dr. Marvin Dunn, Kansas City—Treatment of Resistant Congestive Heart Failure
Dr. William Nice, Topeka—Tuberculin Testing Surveys
Dr. Robert M. Brooker, Topeka—Atypical Acid-fast Infections
Dr. John K. Fulton, Wichita—Business Session

Dr. John K. Fulton, presiding—Round Table Discussion: Chronic Non-tuberculosis Lung Diseases
Participants:
Dr. Martin J. FitzPatrick, Kansas City, Moderator
Dr. Ben H. Buck, Jr., Wichita
Dr. Helen A. Dickie, Wisconsin University Medical School

Dr. Helen A. Dickie—Farmer's Lung

Extra-pulmonary Tuberculosis:
Dr. John I. Waller, Halstead—Genito-urinary
Dr. John F. Lance, Jr., Wichita—Tuberculosis of the Bone
Dr. Roy A. Lawson, Chanute—Tuberculosis Meningitis

Dr. J. L. Morgan, Emporia—Chronic Cor Pulmonale
"Stump the Experts" X-ray Panel
Participants:
Dr. Helen A. Dickie
Dr. G. M. Tice

The following day, Dr. L. M. Furcolon, Kansas City Communicable Disease Center, will moderate a panel discussion on the values of tuberculin testing and case finding. Dr. Martin FitzPatrick, University of Kansas Medical School, will give the keynote address "Challenges on the Road Ahead" at the Association's afternoon session.

Dr. Charles Pokorny, Halstead, extends invitation to all Kansas doctors interested in respiratory diseases to attend the combination meeting.

The Academy of Psychosomatic Medicine will hold its Annual Meeting at the Hotel Sheraton-Cleveland in Cleveland on October 15-17, 1959. The Meeting has been specifically planned for the psychosomatic orientation of the general practitioner, internist, pediatrician, obstetrician, and other nonpsychiatric physicians. There will be five Symposia—with four speakers in each Symposium—on Psychopharmacology, Anxiety, Mental Drug Therapy, Psychotherapy for the Nonpsychiatrist, and Depression. Panel discussions are scheduled on the psychosomatic aspects of gastrointestinal, arthritis-neuromuscular, and cardiovascular diseases; obesity; obstetrics-gynecology; alcoholism; geriatrics; headaches-migraine; pediatrics; hypnosis; allergy; pre- and postoperative care; and malignancy. There will be two panels on The Newer Anti-Depressive Drugs.

A list of the speakers includes: Edward Stainbrook, M.D., Chief, Department of Psychiatry, Medical School, University of Southern California; I. Arthur Mirsky, M.D., Professor of Clinical Science and Research Psychology, University of Pittsburg Medical School; Frank J. Ayd, Jr., M.D., Chief of Psychiatry, Franklin Square Hospital, Baltimore; David J. Impastato, M.D., Associate Clinical Professor of Psychiatry, New York University College of Medicine; C. Knight Aldrich, M.D., Chief of Psychiatry, School of Medicine, University of Chicago; Victor Szyrynski, M.D., Professor of Psychotherapy, University of Ottawa Medical School; A. Dixon Weatherhead, M.D., Chief of Psychiatry, Cleveland Clinic; Leo Alexander, M.D., Director, Neurobiologic Unit, Division of Psychiatric Research, Boston State Hospital.

Members of The American Academy of General Practice attending will receive one hour of category II credit for each hour in attendance. Added features are breakfasts and luncheons, a dinner-dance with entertainment, and daily tours and social events for doctors' wives. All interested physicians are invited. For further information address inquiries to: Zale A. Yanof, M.D., Program Chairman, Academy of Psychosomatic Medicine, 2282 Ashland Avenue, Toledo 10, Ohio.

The fine art of executive decision consists in not deciding questions that are not now pertinent, in not deciding prematurely, in not making decisions that cannot be made effective, and in not making decisions that others should make.—*Chester I. Barnard*

Book REVIEWS

An Atlas of Normal Radiographic Anatomy. By Isadore Meschan, M.A., M.D., with the assistance of R. M. F. Farrer-Meschan, M.B., B.S. (Melbourne, Australia), M.D. Price $16.00. 759 pp. Published by W. B. Saunders Company, Philadelphia and London, 1959.

This is the second edition of this excellent work by the authors. The first edition has been very popular in all radiology offices, used often by x-ray technicians to gain a better understanding in positioning of patients for all radiographic procedures.

In no other text is there better correlation of anatomy with the x-ray findings. There are numerous radiographic reproductions with detailed labeling of the parts.

This new edition covers the same material as the first one, but adds such practical new subjects as radiation protection, bone growth and development, arteriography and venography of the brain, cervical myelography, and special studies of the heart and major blood vessels.

This text is highly recommended for all radiologists and x-ray technicians. It should be an excellent addition to any library of the orthopedic surgeon, the internist, the pediatrician, and the general practitioner.—*D.M.M.*

Patient Care and Special Procedures in X-ray Technology. By Vennes and Watson. Publication date: April 30, 1959. Price $5.75. 200 pp. Published by The C. V. Mosby Company.

This volume of 195 pages treats the subject material in a clear and concise manner. Heretofore there has been no volume written that covers all of the important procedures outlined in this text.

There are ten chapters, titled as follows: Introduction to Patient Care; The Technician and the Patient; The Technician and General Patient Care; Radiography and Fluoroscopy; The Technician and Special Patient Care; The Technician and Special Patient Care —Indications for Only Bedside Radiography; The Patient and Diagnostic Examinations; Neuroradiography; Vascular Radiography; Radiography in the Operating Room and the Recovery Room.

This book should be a "must" in every hospital radiology department, a text for every nurse working in a hospital, and especially recommended for nurses in supervising capacity such as operating room and floor supervisors.—*D.M.M.*

Ciba Foundation Symposium on the Regulation of Cell Metabolism. Price $8.75. 302 pp. Boston, Little, Brown and Company, 1959.

This symposium originated with a proposal of Dr. Hans Krebs, Nobel prize winner. The central theme suggested by Dr. Krebs is the regulation of cell metabolism at the substrate level. A distinguished group of investigators, including Nobel prize winner, Fritz Lipmann, presented their views on this important question. In general the book is a stimulating one for anybody *well versed in biochemistry,* particularly the discussions following the presentations of the some 20 papers given at this symposium. On the other hand, it might prove to be extremely confusing to anybody who lacks firm biochemical background.

—*S.G.*

A Way of Life and Selected Writings. . . . By Sir William Osler. Price $1.50. 275 pp. New York, Dover Publications. Paperbound.

This inexpensive paper-back reprint of a volume that appeared in 1951 as *Selected Writings of Sir William Osler* gives a good sampling of the humanistic writings of a man who has become so much of a myth that every one talks about him but no one reads him. It includes six of the biographical pieces Osler did so well, such frankly inspirational lectures as "The Student Life" and "A Way of Life" and, what may turn out to be his most important contributions, those studies in the humanism of science, "The Growth of Truth" and "The Old Humanities and the New Science."—*G.S.T.C.*

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(BRAND OF PIPAMAZINE)

A new drug with specific effectiveness in nausea and vomiting of pregnancy, Mornidine eliminates the ordeal of morning sickness.

With its selective action on the vomiting center, or the medullary chemoreceptor "trigger zone," Mornidine possesses the advantages of the phenothiazine drugs without unwanted tranquilizing activity.

Doses of 5 to 10 mg., repeated at intervals of six to eight hours, provide excellent relief all day. In patients who are unable to retain oral medication when first seen, Mornidine may be administered intramuscularly in doses of 5 mg. (1 cc.).

Mornidine is supplied as tablets of 5 mg. and as ampuls of 5 mg. (1 cc.).

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Combines the anti-inflammatory effect of hydrocortisone with the comprehensive bactericidal action of the antibiotics.

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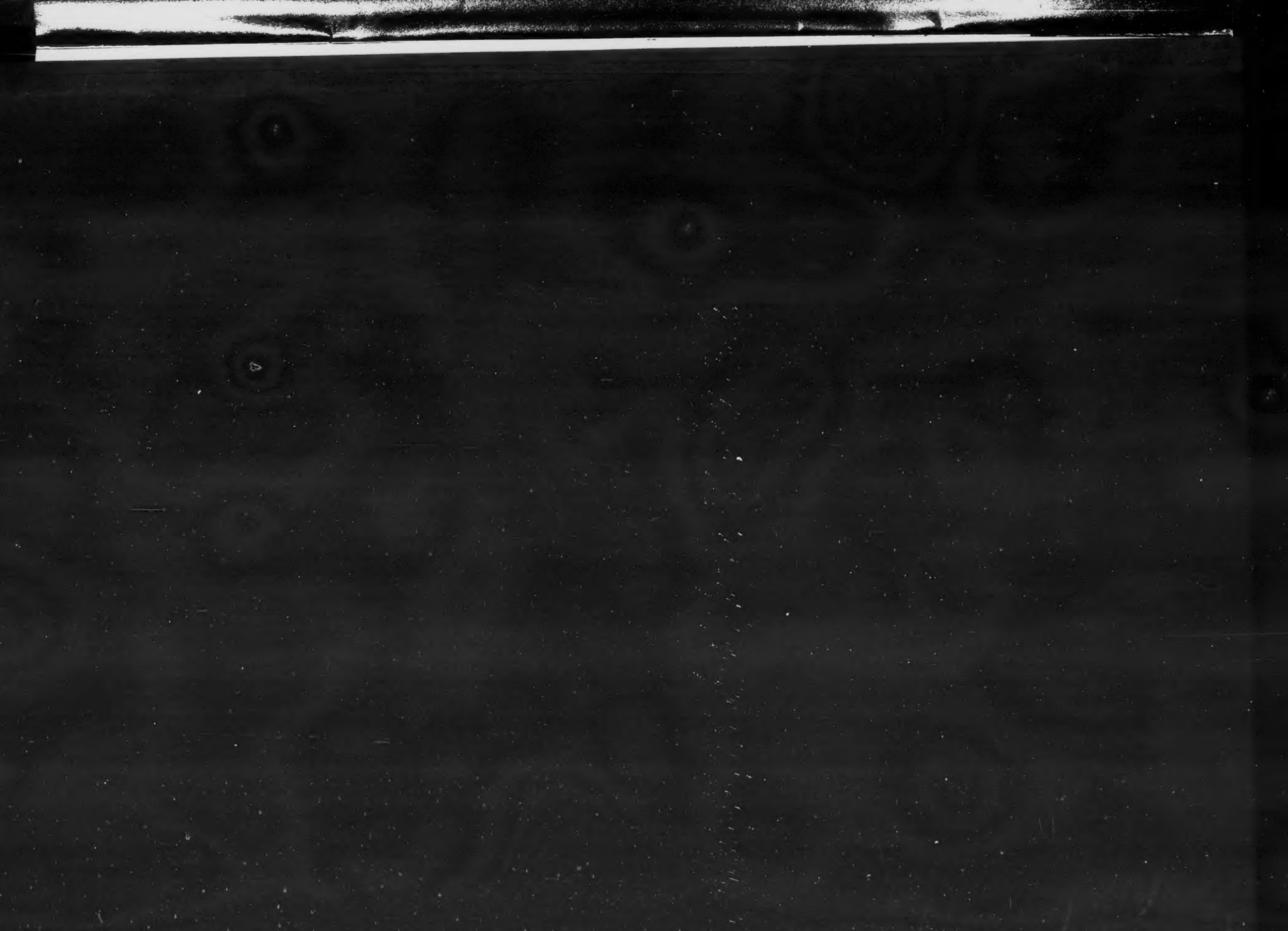
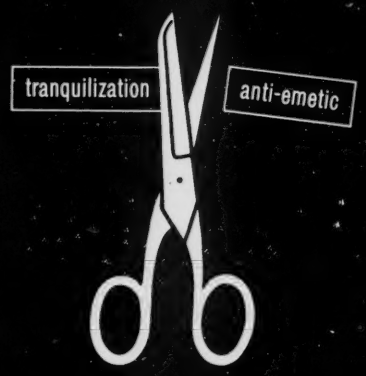


now potent tranquilizer therapy is safer than ever



Virtual freedom of Mellaril from major toxic effects is due to greater specificity of tranquilizing action—divorced from such "diffuse" effects as anti-emetic action.

MELLARIL is virtually free of such toxic effects as

- jaundice
- Parkinsonism
- blood dyscrasia

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines. . . . This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."

SANDOZ

Mellaril®

THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels

remarkable lack of side effects

In more than 3,000 carefully-followed patients, Mellaril has been almost completely free of such major side effects as jaundice, extrapyramidal symptoms, Parkinsonism, blood dyscrasia, dermatitis— **even when given in quantities far in excess of the usual dosage.**

"POVERTY" OF SIDE EFFECTS

"The most striking aspect of thioridazine [Mellaril] therapy is the poverty of side effects.... In its lack of side effects and low toxicity, it is superior to all other tranquilizing drugs tested. For this reason also it is well tolerated by patients, particularly those who are not hospitalized and who frequently discontinue their medication because of dizziness, sleepiness, increased tension or parkinsonism with other drugs."[2]

NEGLIGIBLE SIDE EFFECTS

"Side effects were negligible at all dosage levels: no incidence of parkinsonism or other extrapyramidal symptoms. Minimal sedation, on the whole lower than with other tranquilizing agents. No alteration in liver function, urine or blood. No photosensitivity. Patient acceptability was exceptional: lack of drowsiness, lethargy or 'washed out' feeling, permitted patients to carry on normal everyday activities. Orthostatic hypotension was absent. The initial 'keyed up' tense feeling common to other drugs of this type was absent.... Patients forced to interrupt treatment with other phenothiazine derivatives because of parkinsonism or other extrapyramidal symptoms were able to continue therapy with thioridazine without appearance of parkinsonism."[3]

SINGULARLY FREE OF SIDE EFFECTS

"The extrapyramidal syndrome was not encountered in any of its forms. Dizziness and sleepiness responded to a reduction in dosage. Other side effects did not occur.... It is singularly free from the side effects ordinarily seen with these [phenothiazine] compounds."[4]

ABSENCE OF SIGNIFICANT SIDE EFFECTS

"None of the following toxic effects, so common after administration of the phenothiazines, was present during the period of Thioridazine administration: Parkinsonism or Parkinson-like symptoms, photosensitivity, orthostatic hypotension, bone-marrow depression."[1]

MINIMAL SIDE EFFECTS

"Side effects such as extrapyramidal activity, jaundice and photosensitivity have not been observed in patients treated with Thioridazine [Mellaril]. Extrapyramidal side effects produced by other phenothiazines have disappeared promptly with no deterioration in the behavioral response when these patients have been shifted to Thioridazine."[5]

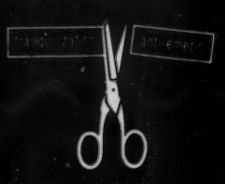
NO JAUNDICE

"No allergic reactions were observed such as skin eruptions, jaundice or agranulocytosis. Central nervous system toxicity, as manifested by extrapyramidal effects, seizures, and excitement did not occur despite the use of high doses (up to 2000 mg.) of the drug."[6]

Mellaril®

THIORIDAZINE

specific, effective tranquilizer • safer at all dosage levels



excellent clinical response

In office practice and in hospitalized patients, Mellaril has proved highly useful for a wide variety of major and minor emotional disorders (such as anxiety, tension, apprehension, alcoholism, agitated psychoneurosis, agitated psychotic states, etc.).

EXTREMELY SATISFACTORY ". . . produced extremely satisfactory results in the broad therapeutic range represented in this series."[3]

POTENT AGENT ". . . appears to be a potent agent in the symptomatic management of a variety of psychiatric states."[4]

MAJOR ADDITION TO THERAPEUTICS "This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."[1]

AN ACTIVE AGENT "Thioridazine is an active therapeutic agent. . . . It is effective in a variety of psychiatric disorders, including schizophrenic reactions. . . . The drug is particularly advantageous for a group of schizophrenic patients who are sometimes made worse by other phenothiazine derivatives or Rauwolfia alkaloids. It should also be suitable for treating patients with psychoneuroses and chronic brain syndrome."[6]

EVEN IN VERY SEVERE CASES "Of the 152 patients treated 25 have been released and they have not suffered a relapse. This proportion is significant if we stop to consider that we are dealing only with acute cases which had been considered hopeless and obviously destined to finish their days in an asylum."[7]

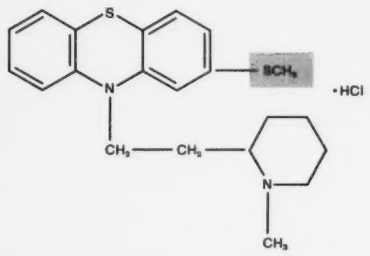
EXCELLENT THERAPEUTIC RESPONSE "Patients with emotional tensions resulting from the stress and strain of life . . . were treated with Mellaril at the dosage level of 10 mg. three times daily. In 94 such patients, 83 obtained an excellent therapeutic response."[8]

Mellaril®

THIORIDAZINE HCl

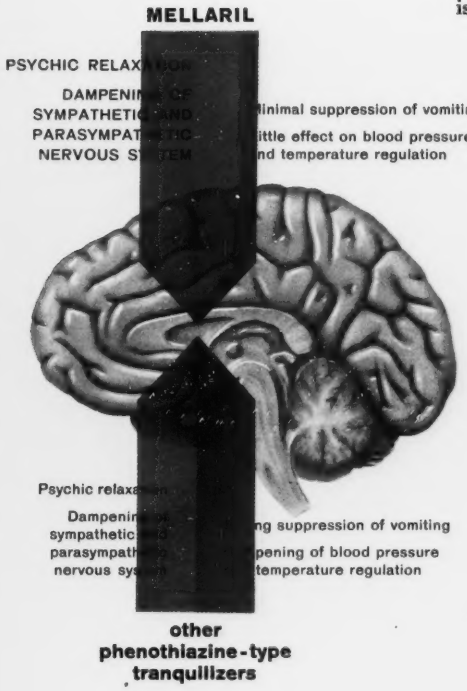
specific, effective tranquilizer • safer at all dosage levels

a new advance in tranquilization:
greater specificity of tranquilizing action plus fewer side effects



Of 109 phenothiazines synthesized by Sandoz, Mellaril was selected as the most promising on the basis of extensive evaluation. The presence of a thiomethyl radical (S-CH$_3$) in the position conventionally occupied by a halogen in other phenothiazines is unique and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.



2 Less "spill-over" action to other brain areas – hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy, while achieving psychomotor control in mental and emotional disorders.

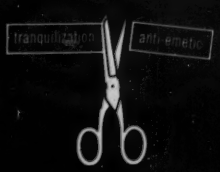
5 Virtual freedom from toxic effects – jaundice, photosensitivity, skin eruptions, disturbed body temperature regulation, blood forming disorders have been absent in reports currently available.

These properties add up to a greater margin of safety in general office practice, in ambulatory psychiatric out-patient clinics, and in hospitalized patients.

Mellaril®

THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels



a guide to administration and dosage

Dosage ranges from 10 mg. three or four times a day in milder situations to 25 mg. three or four times a day for more disturbed patients. In ambulatory psychiatric out-patients, dosages of 50 to 100 mg. three or four times a day have been found adequate. For severely disturbed hospitalized psychotics, dosages of 200 to 300 mg. three times a day may be administered.

Dosage must be individualized according to the condition and degree of response. In all cases, the smallest effective dosage should be determined for each patient.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
	ADULTS	
Mental and Emotional Disturbances:		
MILD—where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE—where agitation exists in psychoneurosis, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE—in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
	CHILDREN	
BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg.

PRECAUTIONS: Although possessing a unique structure and a selectivity of action which broadens its therapeutic ratio, the physician should be alert to the possibility of untoward reactions in certain susceptible individuals. In particular, he should watch for potential hemopoietic depression, jaundice or orthostatic hypotension. As with other phenothiazines, Mellaril is contraindicated in severely depressed or comatose states from any cause.

SUPPLIED: MELLARIL Tablets, 10 mg., 25 mg., 100 mg. Bottles of 100.

1. Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959. 2. Kinross-Wright, V. J.: Lecture, Clinical Meeting, American Medical Association, Minneapolis, Dec. 4, 1958. 3. Kinross-Wright, V. J.: Scientific Exhibit, Clinical Meeting, American Medical Association, Minneapolis, Dec. 2-5, 1958. 4. Cohen, S.: TP-21, a new phenothiazine, Am. J. Psychiat. *115*:358, Oct. 1958. 5. Glueck, B.: Scientific Exhibit, American Psychiatric Association, Philadelphia, April 27-May 1, 1959. 6. Hollister, L. E., and Macdonald, B. F.: Presented at California Medical Association; Section on Psychiatry, San Francisco, Feb. 25, 1959. 7. Remy, M.: Schweiz. med. Wchnschr. *88*:1221, Nov. 29, 1958. 8. Freed, S. C., in discussion on Thioridazine (Mellaril) in Psychiatric Patients, Hollister, L. E., and Macdonald, B. F., presented at California Medical Association; Section on Psychiatry, San Francisco, Feb. 25, 1959.

- controls neurotic and psychotic patients with anxiety, apprehension, nervous tension
- virtual absence of jaundice, parkinsonism, photosensitivity, dermatitis
- minimal sedation and drowsiness
- does not mask organic conditions such as brain tumors, intestinal obstruction, etc., because of lack of anti-emetic action
- increased specificity of action results in greater safety at all dosage levels

SANDOZ

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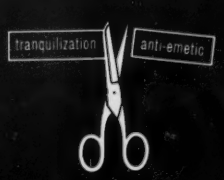
THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels



If one . . . or all . . . needs nutritional support . . .

they
deserve

GEVRAL®

capsules—14 VITAMINS AND 11 MINERALS

Vitamin-Mineral Supplement Lederle

For Complete Formula see PDR (Physicians' Desk Reference), page 689

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

For arthritic M.S.: full corticosteroid benefits from new Gammacorten™

Patient M.S., 81, at the time of the first visit was in severe pain and very uncomfortable. Complained of swelling of wrists, legs and various joints; pain and stiffness in cervical area and lower spine; pain, swelling and limited motion in the fingers; slight ulnar deviation of the hand. M.S. demonstrates position necessary to put on his hat (motion was so restricted that he could not comb his hair).

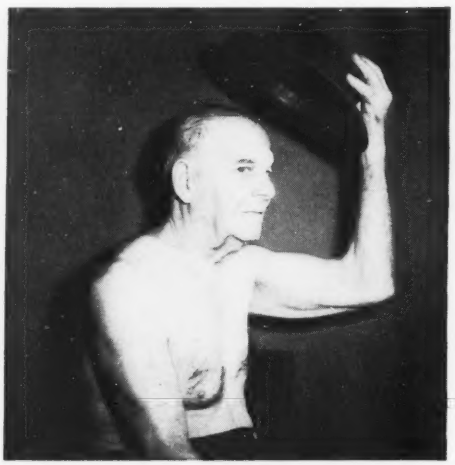
Treatment and Result: After 36 hours of GAMMACORTEN therapy, M.S. had "complete relief." Joint swelling had decreased, pain was almost absent, range of motion had increased dramatically. At the end of the first week of GAMMACORTEN he was free of discomfort and able to return to his job as a porter. M.S. could put on his hat normally, could comb hair; joint function near-normal after first week.

Gammacorten™
(dexamethasone CIBA)

- potent, effective corticosteroid
- profound anti-inflammatory activity
- minimal side effects

From the files of a practicing physician. Photographs used with permission of the patient.

SUPPLIED: GAMMACORTEN Tablets, 0.75 mg. (pink, scored).



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nauseated or vomiting patients
respond quickly and routinely to

Trilafon®
perphenazine

MUCH MORE ACTIVE ANTIEMETIC effect per milligram dosage than with other phenothiazines

MINUS the danger of significant hypotensive reaction

PLUS maintenance of alertness and regular activity

MINUS pain or irritation on deep IM injection

PLUS convenient administration with one of 5 dosage forms (TRILAFON Injection, Suppositories, Syrup, REPETABS,® Tablets)

PROVED CONTROL OF VOMITING OR NAUSEA ASSOCIATED WITH

INFECTION
(*e.g.*, gastroenteritis, pyelitis)

DRUG THERAPY
(*e.g.*, digitalis, nitrogen mustard, aminophylline)

TOXICOSIS
(*e.g.*, uremia, diabetic acidosis, leukemia, carcinomatosis)

MORNING SICKNESS

HYPEREMESIS GRAVIDARUM

OPERATIVE PROCEDURES

MENIERE'S SYNDROME

RADIATION SICKNESS

PSYCHOGENIC PHENOMENA

S-273

SCHERING CORPORATION · BLOOMFIELD, NEW JERSEY *Schering*

NIAMID*

the mood brightener

Lifts the burden of depression... opens the way for a sunnier outlook

New areas of therapy

NIAMID is clinically effective in a broad range of depressive states, including: involutional melancholia, senile depression, postpartum depression, reactive depression, the depressive stage of manic-depressive disease, and schizophrenic depressive reaction.

A wide variety of psychoneurotic depressions seen in general practice also respond effectively to NIAMID. Depression associated with the menopause and with postoperative states, and depression accompanying chronic or incurable diseases such as gastrointestinal and cardiovascular disorders, arthritis, and inoperable cancer, can now be treated successfully with NIAMID.

NIAMID is also strikingly effective for many complaints, mild or severe, vague or well defined, when due to masked depression rather than to organic disease. This masked depression may take the form of guilt feelings, crying spells or sadness, difficulty in concentration, loss of energy or drive, insomnia, emotional fatigue, feelings of hopelessness or helplessness, loss of interest in normal activity, listlessness, apprehension or agitation, and loss of appetite and weight.

While tranquilizers have had some measure of effectiveness in many of these areas, NIAMID now gives the practicing physician a new, safe drug for the specific treatment of depression without the risk of increasing the depressive symptoms.

New safety

NIAMID, in extensive clinical trials, has not been associated with the hepatotoxic reactions observed with the first of the monoamine oxidase inhibitors. These reactions have not been seen with NIAMID.

Acute and chronic toxicity studies show this distinctive freedom from toxicity. Moreover, during the extensive clinical trials of NIAMID by a large number of investigators, not only has no liver damage been reported, but only in a very few isolated instances have hypotensive effects been seen.

The absence of toxicity may be the result of the unique carboxamide group in the NIAMID molecule. This structure may explain why NIAMID is excreted largely unchanged in the urine, with only insignificant quantities of potentially free hydrazine being formed. Previously, where a monoamine oxidase inhibitor had been associated with hepatic toxicity, there was some evidence that substantial quantities of free hydrazine were formed in the body.

Background of NIAMID

A major advance in the treatment of mental depression came with a newer understanding of the influence of brain serotonin and norepinephrine on the mood. Levels of both these neuro-hormones are decreased in animals under experimental conditions analogous to depression; relief of these model depressions is seen with a rise in the levels of both serotonin and norepinephrine.

A second advance came with the development of monoamine oxidase inhibitors, substances which raise the cerebral level of both serotonin and norepinephrine. The first of the amine oxidase inhibitors raised the cerebral level of serotonin, but did not appear to raise that of norepinephrine levels proportionately.

Pfizer *Science for the world's well-being™*

PFIZER LABORATORIES

Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

*TRADEMARK FOR BRAND OF NIALAMIDE

Attention at Pfizer Research was then directed to a new drug that would overcome this disadvantage. NIAMID significantly raises the cerebral level of *both* serotonin and norepinephrine under experimental conditions.

The dramatic discovery of NIAMID now makes available an extremely effective, safe antidepressant for the successful treatment of a full range of depressive states.

Precautions

Side effects are most often minor and mild manifestations of central nervous system stimulation, modifiable by reduction in dosage; these may take the form of restlessness, insomnia, headache, weakness, vertigo, dry mouth, and perspiration. Care should be taken when NIAMID is used with chlorothiazide compounds, since hypotensive effects have been noted in some patients receiving combined therapy—even though hypotension has rarely been noted with NIAMID alone. There has been no evidence of liver damage in patients on NIAMID; however, in patients who have any history of liver disease, the possibility of hepatic reactions should be kept in mind.

Dosage and Administration

Start with 75 mg. daily in single or divided doses. After a week or more, revise the daily dosage upward or downward, depending upon the response and tolerance, in steps of one or one-half 25 mg. tablet. Once satisfactory response has been attained, the dosage of NIAMID may be reduced gradually to the maintenance level.

The therapeutic action of NIAMID is gradual, not immediate. Many patients respond within a few days, others satisfactorily in 7 to 14 days. Some patients, particularly chronically depressed or regressed psychotics, may need substantially higher dosages (as much as 200 mg. daily has been used) and prolonged administration before responses are achieved.

Supply

NIAMID is available in: 25 mg., pink, scored tablets in bottles of 100; and 100 mg., orange, scored tablets in bottles of 100.

References

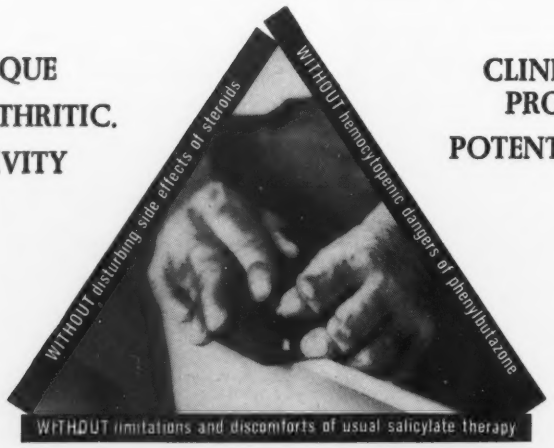
Complete bibliography and Professional Information Booklet are available on request.

*TRADEMARK FOR BRAND OF NIALAMIDE

NIAMID
the mood brightener

UNIQUE
ANTIARTHRITIC.
ACTIVITY

CLINICALLY
PROVEN...
POTENT...SAFE...


WITHOUT disturbing side effects of steroids
WITHOUT hemocytopenic dangers of phenylbutazone
WITHOUT limitations and discomforts of usual salicylate therapy

ARTHROPAN T.M. LIQUID

BRAND OF CHOLINE SALICYLATE, PATENT PENDING

"Our most striking case was that of a 55 year old white male with rheumatoid arthritis, steroid intoxication, duodenal ulcer, taking 40 mg. triamcinalone/day. He is now on Choline Salicylate [Arthropan] alone and has returned to work."[1]

"In a group of patients who habitually develop gastric distress to moderate dosages of aspirin...all tolerated the new preparation [Arthropan] exceedingly well..."[2]

"Patients who had been taking steroid preparations before using Choline Salicylate [Arthropan] were able to reduce the doses (of steroid) and in some instances to discontinue it entirely."[3]

"In no instances did gastrointestinal symptoms preclude administration of Choline Salicylate [Arthropan]."[4]

These reports have emanated from extensive clinical trials[5] in thousands of patients by more than 180 physicians.

RECOMMENDED DOSAGE: (Adults and children over 12 years) *As an anti-inflammatory agent in rheumatoid arthritis and rheumatic fever:* 1-2 teaspoonfuls, 4 times daily at onset of therapy. *As an analgesic or antipyretic:* 1 to 2 teaspoonfuls, 3 to 4 times daily.

NOTE: Unless satisfactory relief is obtained, it is advisable gradually to increase dosage by increments of 1 teaspoonful per day until maximum benefit, without side effects, is attained. *In every case the dosage should be adjusted upwards or downwards to assure full therapeutic activity up to the limit of the patient's tolerance (in the absence of gastrointestinal distress or early salicylism).*

Because of the special chemical structure of 'Arthropan', alkalies or other buffering substances are not required to protect the stomach wall and should not be administered with 'Arthropan'.

SUPPLIED: 16 and 8 oz. bottles. Each ml. of 'Arthropan' contains 174 mg. of Choline Salicylate. Each teaspoonful (5 ml.) contains 870 mg.

CITED REFERENCES: 1. Clark, G. M.: Personal Communication, 1958. 2. Feldman, H. A.: Personal Communication, 1958. 3. Scully, F J.: Treatment of Rheumatic Disorders with Choline Salicylate (to be submitted for publication). 4. Friedland, C. K.: Personal Communication, 1958. 5. Complete data available on request to the Medical Director.

The Purdue Frederick Company DEDICATED TO PHYSICIAN AND PATIENT SINCE 1892
NEW YORK 14, N.Y. | TORONTO 1, ONTARIO

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In the menopause...
transition without tears

Milprem promptly relieves emotional distress with lasting control of physical symptoms

Milprem·

Miltown®+conjugated estrogens (equine)

Supplied in two potencies for dosage flexibility:

MILPREM-400, each coated pink tablet contains 400 mg. Miltown (meprobamate) and 0.4 mg. conjugated estrogens (equine).

MILPREM-200, each coated old-rose tablet contains 200 mg. Miltown and 0.4 mg. conjugated estrogens (equine).

Both potencies in bottles of 60.

Literature and samples on request.

In minutes, Milprem starts to ease anxiety and depression. It relieves insomnia, relaxes tense muscles; alleviates low back pain and tension headache. As the patient continues on Milprem, the replacement of estrogens checks hot flushes and other physical symptoms.

Easy dosage schedule: One Milprem tablet t.i.d. in 21-day courses with one-week rest periods; during the rest periods, Miltown alone can sustain the patient.

WALLACE LABORATORIES, *New Brunswick, N. J.*

CMF-8234-M

helping the hypertensive to help himself...

THEOMINAL® R.S.

(Theominal with Rauwolfia serpentina)

- **Gradual but sustained reduction of blood pressure**
- **Mild bradycardic action**
- **Alleviation of congestive headache, vertigo, dyspnea**
- **Relief from anxiety, excitability, insomnia**
- **Sense of well-being**

Theobromine	**320 mg.**
Luminal®	**10 mg.**
Rauwolfia serpentina alkaloids (alseroxylon)	**1.5 mg.***

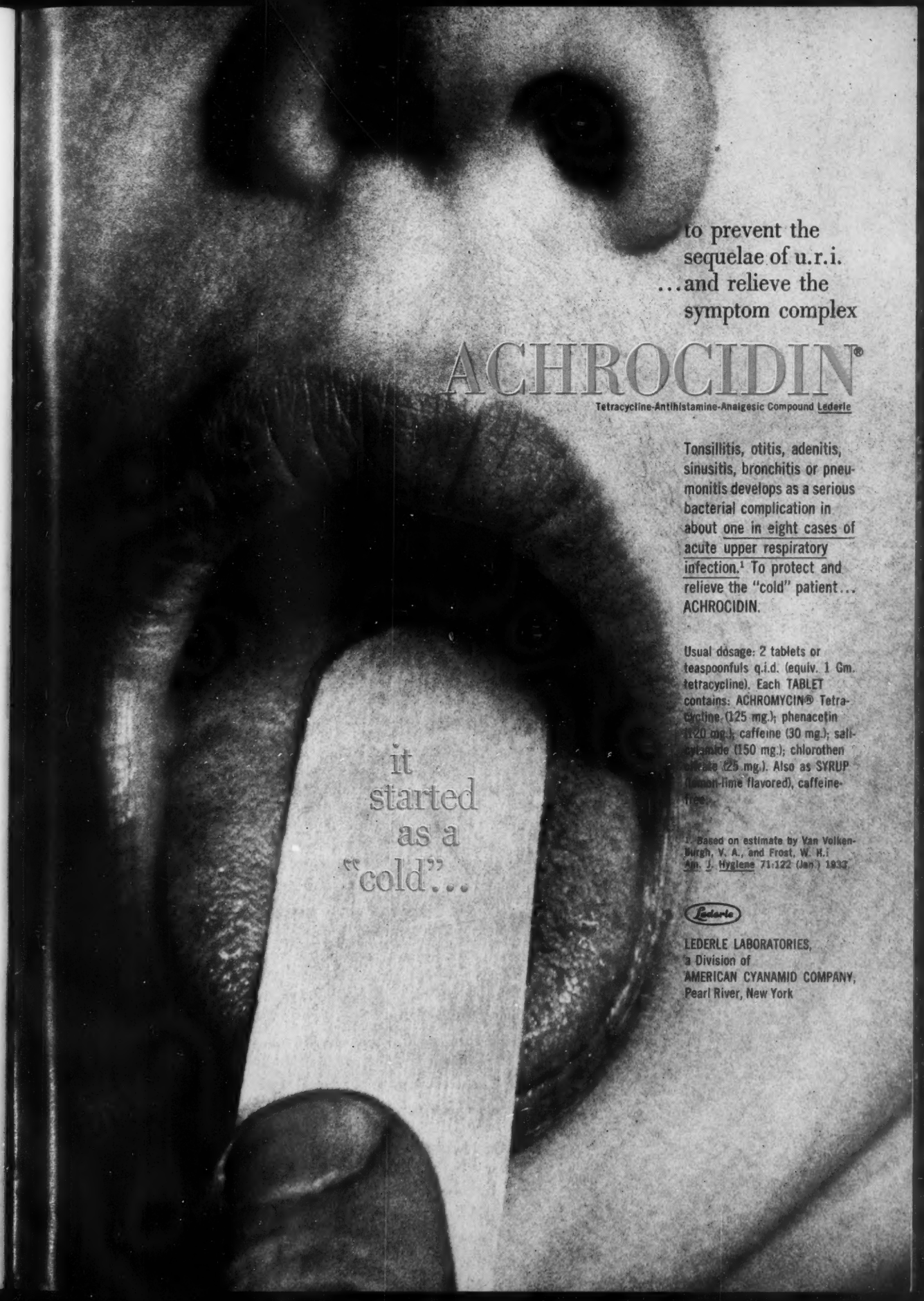
DOSAGE: The usual dose of Theominal R.S. is 1 tablet two or three times daily. When improvement has been maintained for a time, the dose may be reduced or medication suspended occasionally until resumption is indicated.

SUPPLIED: Bottles of 100 and 500 tablets.

* = 0.3 mg. reserpine in activity

Winthrop **LABORATORIES** • NEW YORK 18, N. Y.

Theominal and Luminal (brand of phenobarbital), trademarks reg. U.S. Pat. Off.



to prevent the sequelae of u.r.i. ...and relieve the symptom complex

ACHROCIDIN®

Tetracycline-Antihistamine-Analgesic Compound Lederle

Tonsillitis, otitis, adenitis, sinusitis, bronchitis or pneumonitis develops as a serious bacterial complication in about one in eight cases of acute upper respiratory infection.[1] To protect and relieve the "cold" patient... ACHROCIDIN.

Usual dosage: 2 tablets or teaspoonfuls q.i.d. (equiv. 1 Gm. tetracycline). Each TABLET contains: ACHROMYCIN® Tetracycline (125 mg.); phenacetin (120 mg.); caffeine (30 mg.); salicylamide (150 mg.); chlorothen citrate (25 mg.). Also as SYRUP (lemon-lime flavored), caffeine-free...

1. Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

Lederle

LEDERLE LABORATORIES,
a Division of
AMERICAN CYANAMID COMPANY,
Pearl River, New York

now . . . a new way
to relieve pain and stiffness
in muscles and joints

- Exhibits unusual analgesic properties, different from those of any other drug
- Specific and superior for relief of SOMAtic pain
- Modifies central perception of pain without abolishing natural defense reflexes
- Relaxes abnormal tension of skeletal muscle

SOMA™

N-Isopropyl-2-methyl-2-propyl-1, 3-propanediol dicarbamate

In back pain, bursitis, sprains, strains, and bruises, whiplash and other traumatic injuries, inflammatory and degenerative muscle and joint complaints.

Many patients report they feel better and sleep better with SOMA than with any previously used analgesic or relaxant drug.

SOMA often makes possible reduction or elimination of steroids, salicylates, sedatives and narcotics.

RAPID ACTING. Pain-relieving and relaxant effects start within 30 minutes and last for at least 6 hours.

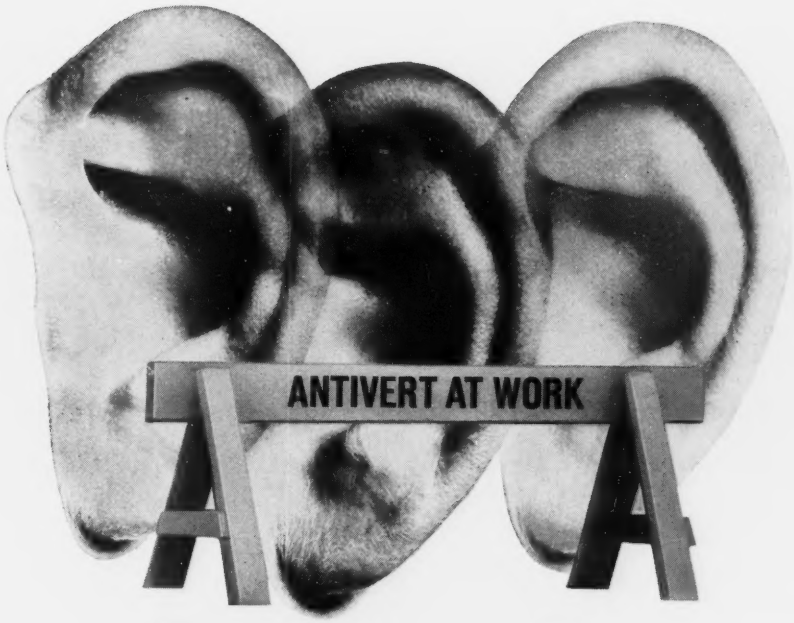
NOTABLY SAFE. Toxicity is extremely low. No effects on liver, endocrine system, blood pressure, blood picture or urine have been reported. Some patients may become sleepy on higher than recommended dosage.

EASY TO USE. Usual adult dose is one 350 mg. tablet 3 times daily and at bedtime.

SUPPLIED: Bottles of 50 white sugar-coated 350 mg. tablets.

Literature and samples on request.

WALLACE LABORATORIES, NEW BRUNSWICK, N. J.



Antivert®

stops vertigo

Improvement is marked in virtually 9 out of 10 vertiginous patients on ANTIVERT.[1] Combines the two most effective therapies for equilibrium disorders. Each ANTIVERT tablet contains:

Meclizine (12.5 mg.) – the most effective antihistaminic to control vestibular dysfunction.[2]

Nicotinic acid (50 mg.) – the drug of choice for prompt vasodilation.[1,3]

Prescribe ANTIVERT for relief of Meniere's syndrome, arteriosclerotic vertigo, labyrinthitis, and streptomycin toxicity. Also effective in recurrent headache, including migraine.

Dosage: One tablet before each meal.

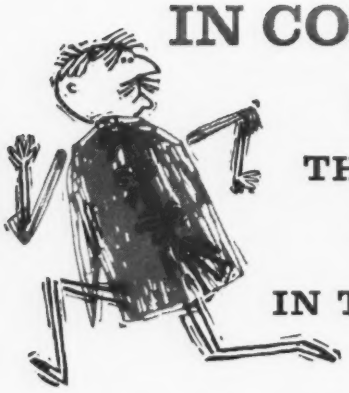
Supplied: In bottles of 100 blue-and-white scored tablets. Prescription only.

References: 1. Menger, H. C.: Clin. Med. 4:313 (March) 1957. 2. Charles, C. M.: Geriatrics 2:110 (March) 1956. 3. Shuster, B. H.: M. Clin. North America 40:1787 (Nov.) 1956. 4. Dolowitz, D. A.: Rocky Mountain M. J. 55:53 (Oct.) 1958.

ROERIG Rx

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being

IN CONSTIPATION



ELIMINATE THE ENEMA AT HOME OR IN THE HOSPITAL

"The effectiveness of the senna preparation ['Senokot'] in reducing the need for enemas...is clearly apparent..."

Kasdon, S. C., Morentin, B. O.: J. Internat. Coll. Surgeons 31:455 (Apr.) 1959.

...time and time again, gentle, natural acting 'Senokot' is cited in clinical reports as the therapy of choice in all patients with acute or chronic constipation.

'Senokot' acts uniquely, through neuro-stimulation of Auerbach's plexus in the colon, duplicating the process of normal defecation.

When therapy with 'Senokot' is substituted for enemas the difference is safe, natural physiologic correction of constipation, and increased patient comfort, as well as significant saving of time for your hospital's nursing staff.

THE EFFECTIVENESS AND SAFETY OF THE DOUBLY STANDARDIZED SENNA CONCENTRATE CONTINUE TO BE DOCUMENTED BY CLINICAL AND LABORATORY INVESTIGATIONS WHICH CONSTITUTE THE FASTEST GROWING BIBLIOGRAPHY* ON CONSTIPATION CORRECTION

*Available upon request to the Medical Director

natural bowel corrective **Senokot®** — Small and easy to swallow, in bottles of 100. TABLETS

natural bowel corrective **Senokot®** — Cocoa-flavored, in 8 and 4 ounce canisters. GRANULES

STANDARDIZED CONCENTRATE OF TOTAL ACTIVE PRINCIPLES OF CASSIA ACUTIFOLIA PODS, PURDUE FREDERICK

The Purdue Frederick Company DEDICATED TO PHYSICIAN AND PATIENT SINCE 1892
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August isn't the only hay fever month* ... and there is no seasonal limit on the antiallergic action of Chlor-Trimeton® Repetabs® 8 or 12 mg.

safest, best tolerated, for both seasonal and nonseasonal allergies
the most prescribed antihistamine in the United States

Bottles of 100 and 1000.
SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY

**in every month of the year there are allergenic pollens thriving in some part of the United States*

SYMBOL OF THE ONE-DOSE CONVENIENCE YOU WANT FOR YOUR PATIENT

PROMPT REPETAB RELIEF • LASTS ALL DAY OR NIGHT •

Schering

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Incremin®

Lysine-Vitamins Lederle

with iron Syrup

for the undersized underweight child

build appetite

with
B complex
vitamins

prevent nutritional anemia

with ferric pyrophosphate, a form of iron exceptionally well-tolerated

promote protein uptake

with the potentiating effect of l-Lysine on low-grade protein foods

in taste-tempting cherry flavor

Average dosage, 1 teaspoonful (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	.75%

Bottles of 4 and 16 fl. oz.

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

day and night—ulcer control with **B.I.D.** *dosage*

Just one 10 mg. Daricon tablet in the morning, and one at night before retiring, keeps your patient free from the pain and discomfort caused by gastrointestinal spasm, hypermotility, and hypersecretion.

Daricon is a remarkably potent and well tolerated antisecretory/antimotility agent. Its *naturally* prolonged action provides day and night relief of pain and symptoms associated with peptic ulcer, functional bowel syndrome, biliary tract dysfunctions, and other gastrointestinal disorders characterized by spasm, hypermotility, and hypersecretion.

EVEN REFRACTORY CASES RESPOND

new **DARICON***

oxyphencyclimine hydrochloride

Pfizer *Science for the world's well-being*™

Pfizer Laboratories
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, New York

References: 1. Finkelstein, M., et al.: J. Pharmacol. & Exper. Therap. 125:330 (April) 1959. 2. McHardy, G., et al.: Postgrad. Med., in press. 3. Winkelstein, A.: Amer. J. Gastroenterol., in press. 4. Finkelstein, M., et al.: Presented at Fall Meeting, Amer. Soc. Pharmacol. & Exper. Therap., 1958. 5. Leming, B.: Clin. Med. 6:423 (March) 1959.

*Trademark

OFFERS HIGHER BLOOD LEVELS—FASTER—THAN

ANY OTHER SALT OF ORAL PENICILLIN:

COMPOCILLIN®-VK

Potassium Penicillin V

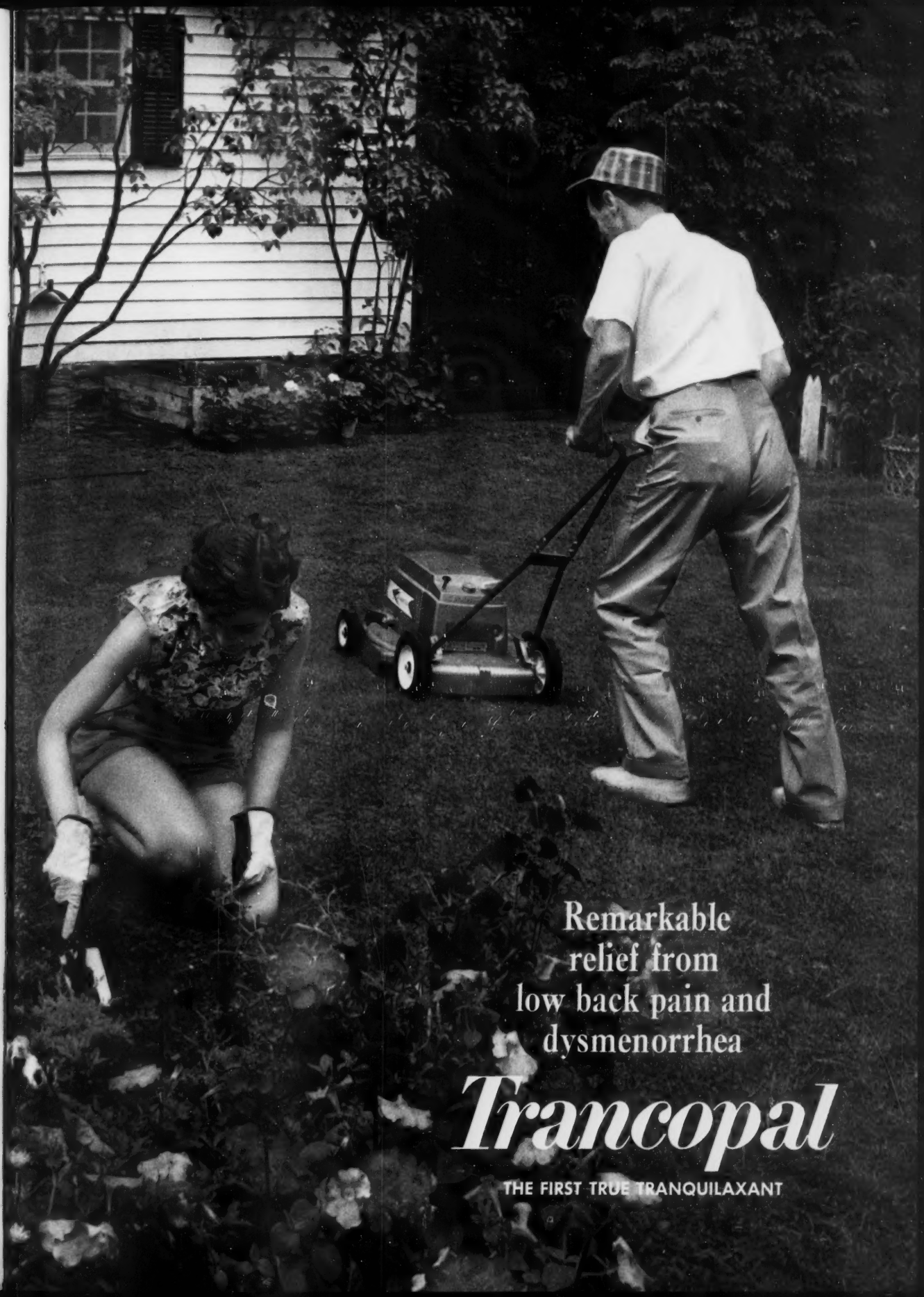
908129

® FILMTAB — FILM-SEALED TABLETS, ABBOTT. U.S. PAT. NO. 2881085

Supplied: Compocillin-VK Filmtabs, 125 mg. (200,000 units), bottles of 50 and 100; 250 mg. (400,000 units), bottles of 25 and 100. Compocillin-VK Granules for Oral Solution come in 40-cc. and 80-cc. bottles. When reconstituted, each 5-cc. teaspoonful represents 125 mg. (200,000 units) of potassium penicillin V.

ABBOTT

in tiny, easy-to-swallow Filmtabs® in tasty, cherry-flavored Oral Solution


Remarkable
relief from
low back pain and
dysmenorrhea
Trancopal
THE FIRST TRUE TRANQUILAXANT

Here is can expect prescribe

case profile no. 2758*

A middle-aged man had intermittent low back pain attributed to injuries received in an automobile accident three years ago. The pain radiated down both legs, making the patient walk bent over. He also had difficulty in getting out of bed and had to pull his knees up and roll out. Any heavy lifting precipitated a new attack, and he tired easily.

Findings on x-ray of the thoracic and lumbar spine were negative. All other laboratory studies were within normal limits. A herniated disc, though still a possibility, was temporarily ruled out by the neurologic examination. Previous treatment consisted of analgesics, steroids (without success), and narcotics during severe attacks.

On a dosage of Trancopal, 100 mg. t.i.d., this patient is able to walk around almost normally and carry on his regular activities as long as he does not overdo. He has received Trancopal for over seven months with excellent relief of symptoms. There have been no side effects.

**Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.*

for low back pain

s what you

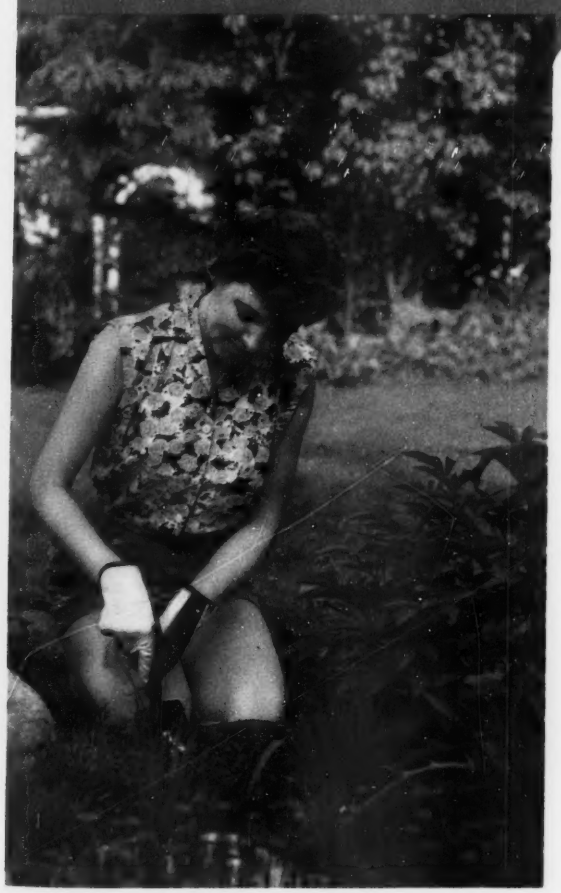
t when you

e

THE FIRST TRUE TRANQUILAXANT

Trancopal®

for dysmenorrhea
and premenstrual tension



case profile no. 3347*

A 35-year-old housewife had a history of severe dysmenorrhea and premenstrual tension. Menarche occurred at the age of 14. She is a gravida 2, para 1. Her menstrual cycle is fairly regular, and previous medical history indicates no apparent abnormalities. Findings on pelvic examination were negative. Severe tension and irritability routinely occurred from two to seven days before and during menstruation. Cramping was experienced for all three days of the menstrual period. Analgesic preparations provided limited symptomatic relief.

Trancopal, 200 mg. t.i.d., was prescribed for dysmenorrhea. It not only has relieved the severe cramping, but has provided a welcome relief from the irritability accompanying it. Because of these excellent results, Trancopal also was prescribed for her tenseness during the premenstrual period with a most gratifying response.

This patient has successfully remained on the above regimen for over six months without adverse effects.

Turn Page for Complete Listing of Indications and Dosage

THE FIRST TRUE TRANQUILAXANT

Trancopal

potent muscle relaxant

effective tranquilizer

- In musculoskeletal disorders, effective in 91% of patients.[1]
- In anxiety and tension states, effective in 88% of patients.[1]
- Low incidence of side effects (2.3% of patients). Blood pressure, pulse rate, respiration and digestive processes unaffected by therapeutic dosage. No effects on hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications:

Musculoskeletal:
Low back pain (lumbago, etc.)
Neck pain (torticollis, etc.)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disc syndrome
Fibrositis
Ankle sprain, tennis elbow, etc.
Myositis
Postoperative muscle spasm

Psychogenic:
Anxiety and tension states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris
Alcoholism

Now available in two strengths:

Trancopal Caplets*:
100 mg. (peach colored, scored), bottles of 100.

New Strength

Trancopal Caplets:
200 mg. (green colored, scored), bottles of 100.

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours.

1. Collective Study, Department of Medical Research, Winthrop Laboratories.

Winthrop LABORATORIES
New York 18, New York

Trancopal (brand of chlormezanone) and Caplets, trademarks reg. U.S Pat. Off. Printed in U.S.A. 8-59 (1385 AM)

Doctors, too, like "Premarin"®

THE doctor's room in the hospital is used for a variety of reasons. Most any morning, you will find the internist talking with the surgeon, the resident discussing a case with the gynecologist, or the pediatrician in for a cigarette. It's sort of a club, this room, and it's a good place to get the low-down on "Premarin" therapy.

If you listen, you'll learn not only that doctors like "Premarin," but *why* they like it.

The reasons are fairly simple. Doctors like "Premarin," in the first place, because it really relieves the symptoms of the menopause. It doesn't just mask them — it replaces what the patient lacks — natural estrogen. Furthermore, if the patient is suffering from headache, insomnia, and arthritic-like symptoms due to estrogen deficiency, "Premarin" takes care of that, too.

"Premarin," conjugated estrogens (equine), is available as tablets and liquid, and also in combination with meprobamate or methyltestosterone.

Ayerst Laboratories • New York 16, N. Y. • Montreal, Canada

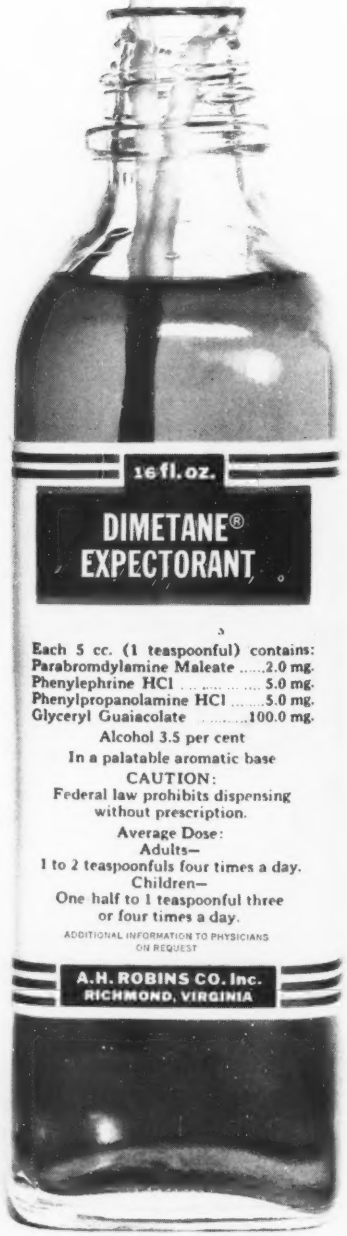
Ayerst®

5842

new for cough

tastes good

the straws just symbolize the good flavor! And DIMETANE EXPECTORANT for cough is as effective as it is delicious. FORMULA: each 5 cc. (1 teaspoonful) contains: DIMETANE (Parabromdylamine Maleate) 2.0 mg.; Glyceryl Guaiacolate 100.0 mg.; Phenylephrine Hydrochloride, USP 5.0 mg.; Phenylpropanolamine Hydrochloride, NNR 5.0 mg.; Alcohol 3.5% in a good-tasting aromatic base.



works better

combines the unsurpassed antihistamine Dimetane with the clinically proven expectorant glyceryl guaiacolate (which increases R.T.F. almost 200%) and two recognized decongestants. When additional cough suppressant action is indicated, prescribe DIMETANE EXPECTORANT-DC, which provides the basic formula with dihydrocodeinone bitartrate 1.8 mg. per 5 cc. (exempt narcotic).

Dimetane® Expectorant
Dimetane® Expectorant-DC

Robins

(WITH DIHYDROCODEINONE BITARTRATE 1.8 MG./5CC.)

VESPRIN made the difference

SQUIBB TRIFLUPROMAZINE HYDROCHLORIDE

in anxiety and tension states / psychomotor agitation / phobic reactions / obsessive reactions / senile agitation / agitated depression / emotional stress associated with a wide variety of physical conditions

In the patient with anxiety and tension symptoms – Vesprin calms him down without slowing him up...and does not interfere with his working capacity. Vesprin permits tranquilization *without* oversedation, lethargy, apathy or loss of mental clarity.[4]

And Vesprin exhibits an improved therapeutic ratio – enhanced efficacy with a low incidence of side effects; no reported hypotension, extrapyramidal symptoms, blood dyscrasia or jaundice in patients treated for anxiety and tension.[1,2,3]

dosage: for "round-the-clock" control – 10 mg. to 25 mg., b.i.d.; for "once-a-day" use – 25 mg. once a day, appropriately scheduled, for therapy or prevention. **supply:** Oral Tablets, 10, 25 and 50 mg., press-coated, bottles of 50 and 500; Emulsion (Vesprin Base) – 30 cc. dropper bottles and 120 cc. bottles (10 mg./cc.). **references:** 1. Stone, H.H.: Monographs on Therapy *3*:1 (May) 1958. 2. Reeves, J.E. Postgrad. Med. *24*:687 (Dec.) 1958. 3. Burstein, F.: Clinical Research Notes *2*:3, 1959. 4. Kris, E.: Clinical Research Notes *2*:1, 1959. VESPRIN® is a Squibb Trademark

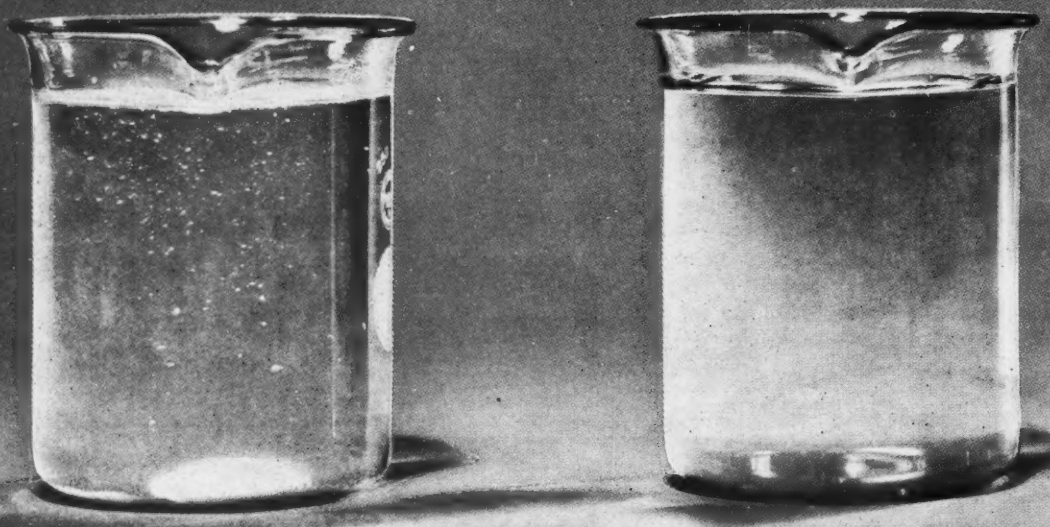
Vesprin—the tranquilizer that fills a need in every major area of medical practice

SQUIBB
Squibb Quality –
the Priceless Ingredient

avoid the risk of insoluble, irritating aspirin particles

Chief among the drawbacks to aspirin usage is gastric intolerance. This ranges from mild upset and "heartburn" to severe hemorrhagic gastritis.[1-10] Studies performed in conjunction with gastrectomy[4-6] and gastroscopy[2] have shown insoluble aspirin particles firmly adherent to the gastric mucosa and imbedded between rugae. Reactions varying from mild hyperemia to erosive gastritis have been reported to occur in the areas immediately surrounding these adherent particles.[2-4-6] This is reported to be particularly true in patients with peptic ulcer.[4]

CALURIN is the freely soluble, stable calcium aspirin complex. Its high solubility forestalls gastric irritation or damage

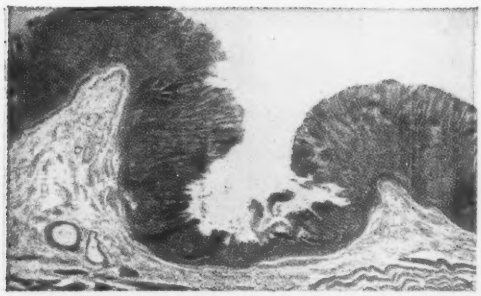


Regular aspirin crystals 24 hours after being mixed into water.

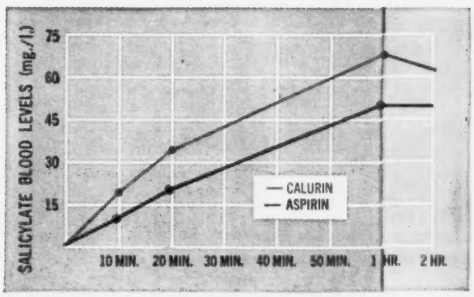
Calurin crystals in solution one minute after being mixed into water.

CALURIN*

STABLE SOLUBLE CALCIUM-ACETYLSALICYLATE-CARBAMIDE



Particle-induced ulceration — section through lesion found in gastrectomy specimen. An aspirin particle was found firmly imbedded in this undermined erosion. Such lesions may be associated with the relative insolubility of aspirin, which remains in particulate form after dispersion in gastric contents.



Calurin, being freely soluble, is promptly available for absorption into the systemic circulation. Salicylate blood levels in 12 subjects receiving both Calurin and plain aspirin were found to rise more than twice as high within ten minutes following Calurin. Also, these levels persisted higher for at least two hours.[11]

CALURIN is the aspirin of choice, especially when high-dosage, long-term therapy is indicated:

1. High solubility forestalls gastric irritation or damage. This advantage is of special importance in arthritis and other conditions requiring high-dosage, long-term therapy.
2. Produces high salicylate blood levels rapidly for prompt analgesic, anti-pyretic, anti-arthritic effect.
3. Sodium-free — for safer long-term therapy.
4. Flavored: can be chewed or dissolved in the mouth without water if desired — an advantage for patients requiring aspirin administration during the night and for pediatric patients.

Dosage: Each tablet of Calurin is equivalent to 300 mg. (5 gr.) of acetylsalicylic acid. For relief of pain and fever in adult patients, the usual dose of Calurin is 1 to 3 tablets every 4 hours, as needed; in arthritic states, 2 or 3 tablets 3 or 4 times daily; in rheumatic fever, 3 to 5 tablets 4 or 5 times daily. For children over 6 years, the usual dose is 1 tablet every 4 hours; for children 3 to 6 years, ½ tablet every 4 hours, as required. Not recommended for children under 3.

REFERENCES: 1. Waterson, A. P.: Aspirin and gastric haemorrhage, Brit. M. J. **2**:1531, 1955. 2. Douthwaite, A. H., and Lintott, G. A. M.: Gastroscopic observation of the effect of aspirin and certain other substances on the stomach, Lancet **2**:1222, 1938. 3. Editorial Comments: The effect of acetylsalicylic acid (aspirin) on the gastric mucosa, Canad. M. A. J. **80**:47, 1959. 4. Muir, A., and Cossar, I. A.: Aspirin and ulcer, Brit. M. J. **2**:7, 1955. 5. Muir, A., and Cossar, I. A.: Aspirin and gastric haemorrhage, Lancet **1**:539, 1959. 6. Schneider, E. M.: Aspirin as a gastric irritant, Gastroenterology **33**:616, 1957. 7. Bayles, T. B., and Tenckhoff, H.: Salicylate therapy in rheumatic diseases, Scientific Exhibit, Ann. Mtg. A. M. A., San Francisco, Calif., June, 1958. 8. Batterman, R. C.: Comparison of buffered and unbuffered acetylsalicylic acid, New Eng. J. M. **258**:213, 1958. 9. Cronk, G. A.: Laboratory and clinical studies with buffered and nonbuffered acetylsalicylic acid, New Eng. J. M. **258**:219, 1958. 10. Editorial: Aspirin plain and buffered, Brit. M. J. **1**:349, 1959. 11. Smith, P. K.: Plasma concentration of salicylate after the administration of acetylsalicylic acid or calcium acetylsalicylate to human subjects, Report submitted to Smith-Dorsey from Dept. of Pharmacology, Geo. Washington Univ. School of Medicine, Washington, D. C., Sept. 5, 1958.

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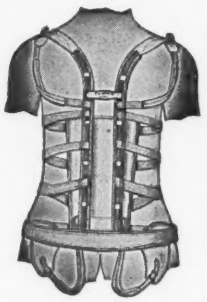

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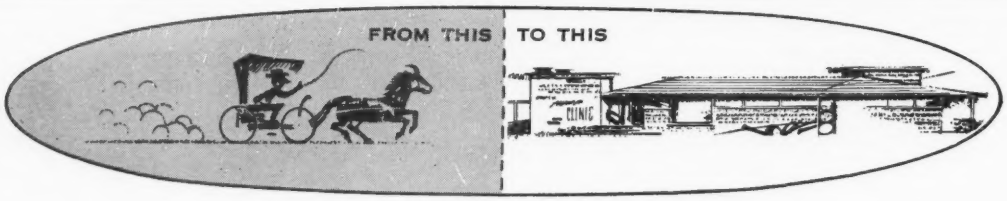

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References: 1. Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958. 4. Bonica, J. J.: in Drugs of Choice, Mosby, St. Louis, 1958, p. 272. 5. Dascomb, H. E.: in Current Therapy, Saunders, Phila., 1958, p.78. 6. Bickerman, H. A.: in Drugs of Choice, Mosby, St. Louis, 1958, p.547.

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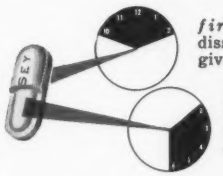

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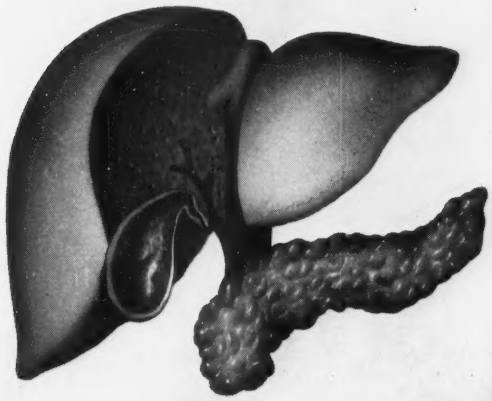

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